

**Lee County Board Of County Commissioners
Agenda Item Summary**

Blue Sheet No. 20040243-UTL

1. REQUESTED MOTION:

ACTION REQUESTED: Approve award of Formal Quotation No.: Q-040024 ANNUAL PURCHASE OF CHEMICALS FOR UTILITIES to the vendors as listed on the attached Lee County tabulation sheet. In the event that the low quoters are unable to establish the effectiveness of their products, request the Purchasing Director be given authority to act on behalf of the Board in the event of vendor non-compliance so that the Purchasing Director can proceed to the next low quoter(s). Also, request Sections 9, 14 and 14A to begin on June 27, 2004. This quotation shall be in effect for one (1) year, or until new quotes are taken and awarded. Also, request authority to renew this quote for four (4) additional one-year periods at the same terms and conditions if in the best interest of Lee County.

WHY ACTION IS NECESSARY: As this expenditure will exceed \$50,000.00; Board approval is required.

WHAT ACTION ACCOMPLISHES: Provides the purchase of chemicals on an as needed basis for various Lee County Water and Wastewater facilities within the Lee County Utilities Department. Annual estimated savings to taxpayers: \$76,000.00.

2. DEPARTMENTAL CATEGORY: 10
COMMISSION DISTRICT # CW

C10D

3. MEETING DATE: 03-30-2004

4. AGENDA:

CONSENT
 ADMINISTRATIVE
 APPEALS
 PUBLIC
 WALK ON
TIME REQUIRED:

5. REQUIREMENT/PURPOSE:
(Specify)

STATUTE
 ORDINANCE
 ADMIN. CODE AC-4-1
 OTHER

6. REQUESTOR OF INFORMATION:

A. COMMISSIONER
 B. DEPARTMENT UTILITIES
 C. DIVISION
 BY: Rick Diaz, P.E., Director
 3/3/04

BACKGROUND: Sealed quotes were received by the Division of Purchasing On December 16, 2003. On that date twenty-four (24) responses were received. Eight (8) were "no bids". After review, recommendation was made to award to the low quoters meeting all specification requirements as listed on the attached Lee County tabulation sheet. Funding will come from the individual department or division's budget whom will be responsible for monitoring their individual expenditures.

Funds are available: Acct Strings OD536265240; OD536085240; OD536015240; OD536295240; OD536195240; OD536285240; OD536205240; OD536165240; OD536275240; OD536255240; OD536185240; OD536245240;

Please see attachments:

- (1) Tabulation Sheet
- (2) Specifications
- (3) Vendor's Submitted Quotation - NALCO
- (4) Vendor's Submitted Quotation - Harcros
- (5) Vendor's Submitted Quotation - Dumont
- (6) Vendor's Submitted Quotation - Odyssey
- (7) Vendor's Submitted Quotation - Allied
- (8) Vendor's Submitted Quotation - Brenntag
- (9) Vendor's Submitted Quotation - Fort Bend Services
- (10) Department's Recommendation

8. MANAGEMENT RECOMMENDATIONS:

9. RECOMMENDED APPROVAL:

A Department Director	B Purchasing or Contracts	C Human Resources	D Other	E County Attorney	F Budget Services	G County Manager
<i>J. Lavender</i> Date: 3-4-04	<i>J. Lavender</i> 3-3-04	N/A		<i>S. [Signature]</i> 3/3/04	<i>QA</i> 3/10/04 <i>OM</i> 3/8/04 <i>Risk</i> 3/10/04 <i>AGC</i> 3/8/04	<i>J. Lavender</i> Date: 3-4-04

10. COMMISSION ACTION:

APPROVED
 DENIED
 DEFERRED
 OTHER

Rec. by CoAtty
 Date: 3/3/04
 Time: 3:45
 Forwarded To:
 Admin 3/3/04

RECEIVED BY
 COUNTY ADMIN:
 3/10/04
 9:20am
 COUNTY ADMIN
 FORWARDED TO: PL
 3/10/04
 10:30 AM

NOTE: ALL VENDORS MEET SPECIFICATIONS; SEE PAGE 9 FOR SPECIFIC ISSUES.

FORMAL QUOTATION #Q-040024		LEE COUNTY, FLORIDA TABULATION SHEET									
OPENING DATE: December 16, 2003		FOR									
BUYER: Chevone Peterson		CHEMICALS FOR UTILITIES									
VENDORS	NALCO COMPANY	ODYSSEY MANF. COMPANY	LEACHEM INDUSTRIES INC.	THE DUMONT COMPANY	TANNER INDUSTRIES INC.	SHANNON CHEMICAL CORP.	HARCROS CHEMICALS INC.				
	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
ACKNOWLEDGE ADDENDUM (S)	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
SECTION 1, ANHYDROUS AMMONIA - TOTAL COST PER TON	NO BID	NO BID	NO BID	NO BID	* 275 PER LB	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
TOTAL COST X 60.6 TONS					\$33,330.00						
SECTION 1A, ANHYDROUS AMMONIA - TOTAL COST PER 150# CYLINDERS	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
TOTAL COST X 4 (150# CYLINDERS)					\$172.00						
SECTION 2, ANIONIC POLYMERS - TOTAL COST PER TON	\$1.24	NO BID	1.249	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
TOTAL COST X 24,000 TONS	\$29,760.00		\$29,976.00								
SECTION 3, AQUA AMMONIA 18% - TOTAL COST PER GALLON	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
TOTAL COST X 8,000 GALLONS					\$1.48						
SECTION 4, BENTONITE CLAY ACCUFLOC SDG - TOTAL COST PER LB	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
TOTAL COST X 500 LBS					\$11,840.00						
SECTION 5, CALCIUM HYPOCHLORITE 3 INCH STABILIZED TABLETS TOTAL COST PER 100# PALS	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
TOTAL COST X 24 (100# PALS)					\$164.00						\$179.00
SECTION 6, CITRIC ACID - TOTAL COST PER LB	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
TOTAL COST X 500 LBS					\$0.98						\$0.69
					\$490.00						\$345.00
											\$4,296.00

VENDORS	NALCO COMPANY	ODYSSEY MANF. COMPANY	LEACHEM INDUSTRIES INC.	THE DUMONT COMPANY	TANNER INDUSTRIES INC.	SEANNON CHEMICAL CORP.	FIACROS CHEMICALS INC.
SECTION 7, HYDRATED LIME -							
TOTAL COST PER 50# BAG	NO BID	NO BID	NO BID	\$5.15	NO BID	NO BID	NO BID
TOTAL COST X 6,480 (50# BAGS)				\$33,372.00			
SECTION 8, HYDROCHLORIC ACID 31% (MURIATIC ACID) -							*****
TOTAL COST PER 275 GALLON TOTES	NO BID	NO BID	NO BID	\$1.95	NO BID	NO BID	\$1.05
TOTAL COST X 4,800 (275 GALLONS) TOTES				\$9,360.00			\$5,040.00
SECTION 8A, HYDROCHLORIC ACID 31% (MURIATIC ACID) -							*****
TOTAL COST PER 15 GALLON CARBOYS	NO BID	NO BID	NO BID	\$2.25	NO BID	NO BID	\$1.75
TOTAL COST X 420 (15 GALLON CARBOYS)				\$945.00			\$735.00
SECTION 8B, HYDROCHLORIC ACID 31% (MURIATIC ACID) -							*****
TOTAL COST PER 1 GALLON JUGS	NO BID	NO BID	NO BID	\$2.75	NO BID	NO BID	\$1.75
TOTAL COST X 244 (1 GALLON JUGS)				\$671.00			\$427.00
SECTION 9, HYDROFLUOSILIC ACID 23%							**
TOTAL COST PER GALLON	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	\$165.00
TOTAL COST X 13,000 GALLONS							
SECTION 9A, HYDROFLUOSILIC ACID 23%							***
TOTAL COST PER 275 GALLON TOTES	NO BID	NO BID	NO BID	\$398.75	NO BID	NO BID	\$508.75
TOTAL COST X 15				\$5,981.25			\$7,631.25
SECTION 10, POLYMER (LIQUID) -							
TOTAL COST PER LB	\$0.75	NO BID	\$0.78	NO BID	NO BID	NO BID	NO BID
TOTAL COST X 2,000 LBS	\$1,500.00		\$1,560.00				
SECTION 11, POTASSIUM PERMANGANATE -							
TOTAL COST PER LB	NO BID	NO BID	NO BID	\$2.95	NO BID	NO BID	\$1.85
TOTAL COST X 2,000 LBS				\$5,900.00			\$3,700.00
SECTION 12, PYRO-PHOSPHATE - TOTAL							
COST PER LB	\$0.58	NO BID	NO BID	NO BID	NO BID	0.847	NO BID
TOTAL COST X 18,000 LBS	\$10,440.00					\$15,246.00	
SECTION 13, SODA ASH -							
TOTAL COST PER 50# BAG	NO BID	NO BID	NO BID	\$14.50	NO BID	NO BID	\$10.50
TOTAL COST X 98 (50# BAGS)				\$1,421.00			\$1,029.00
SECTION 13A, SODA ASH - TOTAL COST PER TON							
TOTAL COST X 200 TONS	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID

VENDORS	NALCO COMPANY	ODYSSEY MANF. COMPANY	LEACHEM INDUSTRIES INC.	THE DUEMONT COMPANY	TANNER INDUSTRIES INC.	SHANNON CHEMICAL CORP.	HARCROS CHEMICALS INC.
SECTION 14, SODIUM HYPOCHLORITE SOLUTION - TOTAL COST PER GALLON	NO BID	0.425	NO BID	\$0.98	NO BID	NO BID	0.408
TOTAL COST X 450,000 GALLONS		\$191,250.00		\$441,000.00			\$183,600.00
SECTION 14A, SODIUM HYPOCHLORITE SOLUTION -							
TOTAL COST PER 55 GALLON DRUM	NO BID	NO BID	NO BID	\$60.50	NO BID	NO BID	\$54.50
TOTAL COST X 20				\$1,210.00			\$1,090.00
SECTION 15, SODIUM METABISULFITE -							*****
TOTAL COST PER 50# BAG	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	\$18.80
TOTAL COST X 500 (50# BAGS)							\$9,400.00
SECTION 16, ZINC ORTHO-PHOSPHATE -							
TOTAL COST PER LB	\$0.52	NO BID	NO BID	\$0.65	NO BID	0.647	NO BID
TOTAL COST X 49,000 LBS	\$25,480.00			\$31,850.00		\$31,703.00	
GRAND TOTAL ALL SECTIONS	\$67,180.00	\$191,250.00	\$31,536.00	\$548,664.25	\$33,330.00	\$46,949.00	
DELIVER WITHIN CALENDAR DAYS	3-5	2	10	7	2	10-14	5-7
DELIVER WITH OWN VEHICLE	NO	YES	NO	YES	YES	NO	WHEN POSSIBLE
LOCAL VENDOR PREFERENCE	NO	NO	NO	YES	NO	NO	NO
MODIFICATIONS	NO	NO	NO	YES	-	NO	YES
SUBMITTALS	YES	YES	YES	YES	YES	YES	YES
QUOTE SIGNED	YES	YES	YES	YES	YES	YES	YES

FORMAL QUOTATION #Q-040024									
OPENING DATE: December 16, 2003									
BUYER: Chevone Peterson									
LEE COUNTY, FLORIDA TABULATION SHEET									
FOR									
CHEMICALS FOR UTILITIES									
VENDORS	FORT BEND SERVICES	GE BETZ	POLYDYNE INC.	CALCIQUEST, INC.	ALLIED UNIVERSAL CORP.	CARUS CHEMICAL COMPANY	CHEMICAL LIME COMPANY		
ACKNOWLEDGE ADDENDUM(S)	YES	YES	YES	YES	YES	YES	YES	YES	YES
SECTION 1, ANHYDROUS AMMONIA - TOTAL COST PER TON	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
TOTAL COST X 60.6 TONS									
SECTION 1A, ANHYDROUS AMMONIA - TOTAL COST PER 150# CYLINDERS	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
TOTAL COST X 4 (150# CYLINDERS)									
SECTION 2, ANIONIC POLYMERS - TOTAL COST PER TON	\$1.04	\$3.13	\$1.09	\$1.45	NO BID	NO BID	NO BID	NO BID	NO BID
TOTAL COST X 24,000 TONS	\$24,960.00	\$75,120.00	\$26,160.00	\$34,800.00					
SECTION 3, AQUA AMMONIA 18% - TOTAL COST PER GALLON	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
TOTAL COST X 3,000 GALLONS									
SECTION 4, BENTONITE CLAY ACCUFLOC EDG - TOTAL COST PER LB	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
TOTAL COST X 500 LBS									
SECTION 5, CALCIUM HYPOCHLORITE 3 INCH STABILIZED TABLETS TOTAL COST PER 100# PAILS	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
TOTAL COST X 24 (100# PAILS)									
SECTION 6, CITRIC ACID - TOTAL COST PER LB	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
TOTAL COST X 500 LBS									

VENDORS	FORT BEND SERVICES	GE BETZ	POLYDYNE INC.	CALCIQUEST, INC.	ALLIED UNIVERSAL CORP.	CARUS CHEMICAL COMPANY	CHEMICAL LIME COMPANY
SECTION 7, HYDRATED LIME - TOTAL COST PER 50# BAG TOTAL COST X 6,480 (50# BAGS)	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	**** \$4.31 \$27,928.80
SECTION 8, HYDROCHLORIC ACID 31% (MURIATIC ACID) - TOTAL COST PER 275 GALLON TOTES TOTAL COST X 4,800 (275 GALLONS) TOTES	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
SECTION 8A, HYDROCHLORIC ACID 31% (MURIATIC ACID) - TOTAL COST PER 15 GALLON CARBOYS TOTAL COST X 420 (15 GALLON CARBOYS)	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
SECTION 8B, HYDROCHLORIC ACID 31% (MURIATIC ACID) - TOTAL COST PER 1 GALLON JUGS TOTAL COST X 244 (1 GALLON JUGS)	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
SECTION 9, HYDROFLUOSILIC ACID 25% TOTAL COST PER GALLON TOTAL COST X 13,000 GALLONS	NO BID	NO BID	NO BID	NO BID	\$1.15 \$14,950.00	NO BID	NO BID
SECTION 9A, HYDROFLUOSILIC ACID 25% TOTAL COST PER 275 GALLON TOTES TOTAL COST X 15	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
SECTION 10, POLYMER (LIQUID) - TOTAL COST PER LB TOTAL COST X 2,000 LBS	\$0.60 \$1,200.00	\$1.42 \$2,840.00	\$0.99 \$1,980.00	\$0.84 \$1,680.00	NO BID	NO BID	NO BID
SECTION 11, POTASSIUM PERMANGANATE - TOTAL COST PER LB TOTAL COST X 2,000 LBS	NO BID	NO BID	NO BID	\$2.10 \$4,202.00	NO BID	NO BID	NO BID
SECTION 12, PYRO-PHOSPHATE - TOTAL COST PER LB TOTAL COST X 18,000 LBS	NO BID	\$0.87 \$15,660.00	NO BID	0.603 \$10,854.00	NO BID	0.6117 \$11,010.60	NO BID
SECTION 13, SODA ASH - TOTAL COST PER 50# BAG TOTAL COST X 98 (50# BAGS)	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
SECTION 13A, SODA ASH - TOTAL COST PER TON TOTAL COST X 200 TONS	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID

VENDORS	FORT BEND SERVICES	GE BETZ	POLYDYNE INC.	CALCIQUEST, INC.	ALLIED UNIVERSAL CORP.	CARUS CHEMICAL COMPANY	CHEMICAL LIMB COMPANY
SECTION 14, SODIUM HYPOCHLORITE SOLUTION - TOTAL COST PER GALLON TOTAL COST X 450,000 GALLONS	NO BID	NO BID	NO BID	NO BID	0.394 \$177,300.00	NO BID	NO BID
SECTION 14A, SODIUM HYPOCHLORITE SOLUTION - TOTAL COST PER 55 GALLON DRUM TOTAL COST X 20	NO BID	NO BID	NO BID	NO BID	\$48.40 \$968.00	NO BID	NO BID
SECTION 15, SODIUM METABISULFITE - TOTAL COST PER 50# BAG TOTAL COST X 500 (50# BAGS)	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID	NO BID
SECTION 16, ZINC ORTHO-PHOSPHATE - TOTAL COST PER LB TOTAL COST X 49,000 LBS	NO BID	\$0.75 \$36,750.00	NO BID	***** \$0.40 \$19,600.00	NO BID	***** 0.3602 \$17,649.80	NO BID
GRAND TOTAL ALL SECTIONS	\$26,160.00	\$130,370.00	\$28,140.00	\$71,136.00	\$193,218.00	\$28,660.40	\$27,928.80
DELIVER WITHIN CALENDAR DAYS	BLANK	10	3-5	1	IMMEDIATELY	5-7	2
DELIVER WITH OWN VEHICLE	NO	YES	NO	NO	YES	NO	NO
LOCAL VENDOR PREFERENCE	BLANK	YES	NO	NO	NO	NO	NO
MODIFICATIONS	NO	NO	NO	NO	NO	NO	NO
SUBMITTALS	YES	YES	YES	YES	YES	YES	YES
QUOTE SIGNED	YES	YES	YES	YES	YES	YES	YES

FORMAL QUOTATION #Q-040024 LEE COUNTY, FLORIDA TABULATION SHEET
 OPENING DATE: December 16, 2003 FOR
 BUYER: Chevone Peterson CHEMICALS FOR UTILITIES

VENDORS	CARMEUSE LIME & STONE, INC.	BRENNTAG MID-SOUTH	ACKNOWLEDGE ADDENDUM(S)
	YES	BLANK	
SECTION 1, ANHYDROUS AMMONIA - TOTAL COST PER TON	NO BID	NO BID	
TOTAL COST X 60.6 TONS			
SECTION 1A, ANHYDROUS AMMONIA - TOTAL COST PER 150# CYLINDERS	NO BID	NO BID	
TOTAL COST X 4 (150# CYLINDERS)			
SECTION 2, ANIONIC POLYMERS - TOTAL COST PER TON	NO BID	NO BID	
TOTAL COST X 24,000 TONS			
SECTION 3, AQUA AMMONIA 18% - TOTAL COST PER GALLON	NO BID	NO BID	
TOTAL COST X 8,000 GALLONS			
SECTION 4, BENTONITE CLAY ACCUFLOC SDG - TOTAL COST PER LB	NO BID	NO BID	
TOTAL COST X 500 LBS			
SECTION 5, CALCIUM HYPOCHLORITE 3 INCH STABILIZED TABLETS TOTAL COST PER 100# PAILS	NO BID	NO BID	
TOTAL COST X 24 (100# PAILS)			
SECTION 6, CITRIC ACID - TOTAL COST PER LB	NO BID	\$0.73	
TOTAL COST X 500 LBS		\$365.00	

VENDORS	CARMEUSE LIME & STONE, INC.	BRENTLAG MID-SOUTH INC.
SECTION 7, HYDRATED LIME - TOTAL COST PER 50# BAG	5.175	
TOTAL COST X 6,480 (50# BAGS)	\$33,534.00	
SECTION 8, HYDROCHLORIC ACID 31% (MURIATIC ACID) - TOTAL COST PER 275 GALLON TOTES	NO BID	*****
TOTAL COST X 4,800 (275 GALLONS) TOTES		\$1.21
		\$5,808.00
SECTION 8A, HYDROCHLORIC ACID 31% (MURIATIC ACID) - TOTAL COST PER 15 GALLON CARBOYS	NO BID	\$1.72
TOTAL COST X 420 (15 GALLON CARBOYS)		\$722.40
SECTION 8B, HYDROCHLORIC ACID 31% (MURIATIC ACID) - TOTAL COST PER 1 GALLON JUGS	NO BID	NO BID
TOTAL COST X 244 (1 GALLON JUGS)		
SECTION 9, HYDROFLUOSILIC ACID 23% TOTAL COST PER GALLON	NO BID	NO BID
TOTAL COST X 13,000 GALLONS		
SECTION 9A, HYDROFLUOSILIC ACID 23% TOTAL COST PER 275 GALLON TOTES	NO BID	****
TOTAL COST X 15		\$412.50
		\$6,187.50
SECTION 10, POLYMER (LIQUID) - TOTAL COST PER LB	NO BID	NO BID
TOTAL COST X 2,000 LBS		
SECTION 11, POTASSIUM PERMANGANATE - TOTAL COST PER LB	NO BID	\$1.92
TOTAL COST X 2,000 LBS		\$3,840.00
SECTION 12, PYRO-PHOSPHATE - TOTAL COST PER LB	NO BID	NO BID
TOTAL COST X 18,000 LBS		
SECTION 13, SODA ASH - TOTAL COST PER 50# BAG	NO BID	\$9.25
TOTAL COST X 98 (50# BAGS)		\$906.50
SECTION 13A, SODA ASH - TOTAL COST PER TON	NO BID	\$200.00
TOTAL COST X 200 TONS		\$40,000.00

VENDORS	CARMEUSE LIME & STONE, INC.	BRENTNAG MID-SOUTH	
SECTION 14, SODIUM HYPOCHLORITE SOLUTION - TOTAL COST PER GALLON TOTAL COST X 430,000 GALLONS	NO BID	NO BID	
SECTION 14A, SODIUM HYPOCHLORITE SOLUTION - TOTAL COST PER 55 GALLON DRUM TOTAL COST X 20	NO BID	NO BID	
SECTION 15, SODIUM METABISULFITE - TOTAL COST PER 50# BAG TOTAL COST X 500 (50# BAGS)	NO BID	\$22.50 \$11,250.00	
SECTION 16, ZINC ORTHO-PHOSPHATE - TOTAL COST PER LB TOTAL COST X 49,000 LBS	NO BID	NO BID	
GRAND TOTAL ALL SECTIONS	\$33,534.00	\$69,079.40	
DELIVER WITHIN CALENDAR DAYS	BLANK	15	
DELIVER WITH OWN VEHICLE	NO	YES	
LOCAL VENDOR PREFERENCE	NO	NO	
MODIFICATIONS	NO	NO	
SUBMITTALS	YES	YES	
QUOTE SIGNED	YES	YES	
NO BIDS			
KEMIRON COMPANIES		* 275 X 60.6 X 2	
LAKEPOINT ENVIRONMENTAL GROUP		** VENDOR QUOTED IN TONS; DOES NOT MEET SPECS	
MERRICK INDUSTRIES, INC.		*** 1.85 PER GALLON X 275 X 15	
SEWER EQUIPMENT CO. OF FL, INC.		**** .15 X 10 LBS TO GALLON X 275 X 15	
CIBA SPECIALTY CHEMICALS		***** DOES NOT MEET MIN QUANTITY DELIVERY; DOES NOT MEET SPECS	
HOWCO ENVIRONMENTAL SERVICES		***** DOES NOT MEET SPECS	
EPPERSON & COMPANY			
GENERAL CHEMICAL CORP.			
POSTING TIME/DATE			
FROM: /			
UNTIL: /			
BY:			



LEE COUNTY
SOUTHWEST FLORIDA

PROJECT NO.: Q-040024

OPEN DATE: December 16, 2003

AND TIME: 2:30 P.M.

PRE-BID DATE: December 3, 2003

AND TIME: 10:00 a.m.

LOCATION: Lee County Purchasing
1825 Hendry Street, 3rd Floor,
Ft. Myers, FL 33901

REQUEST FOR QUOTATIONS

TITLE:

CHEMICALS FOR UTILITIES

REQUESTER: LEE COUNTY BOARD OF COUNTY COMMISSIONERS
DIVISION OF PURCHASING

MAILING ADDRESS

P.O. BOX 398
FORT MYERS, FL 33902-0398

PHYSICAL ADDRESS

1825 HENDRY STREET, 3RD FLOOR
FORT MYERS, FL 33901

BUYER: CHEVONE PETERSON
PHONE NO.: (239) 344-5450

GENERAL CONDITIONS

Sealed Quotations will be received by the DIVISION OF PURCHASING, until 2:30pm on the date specified on the cover sheet of this "Request for Quotations", and opened immediately thereafter by the Purchasing Director or designee.

Any question regarding this solicitation should be directed to the Buyer listed on the cover page of this solicitation, or by calling the Division of Purchasing at (239) 689-7385.

1. SUBMISSION OF QUOTE:

- a. Quotations shall be sealed in an envelope, and the outside of the envelope should be marked with the following information:
 - 1. Marked with the words "Sealed Quote"
 - 2. Name of the firm submitting the quotation
 - 3. Title of the quotation
 - 4. Quotation number

- b. The Quotation shall be submitted in triplicate as follows:
 - 1. The original consisting of the Lee County quotes forms completed and signed.
 - 2. A copy of the original quote forms for the Purchasing Director.
 - 3. A second copy of the original quote forms for use by the requesting department.

- c. The following should be submitted along with the quotation in a separate envelope. This envelope should be marked as described above, but instead of marking the envelope as "Sealed Quote", please indicate the contents; i.e., literature, drawings, submittals, etc. This information should be submitted in duplicate.
 - 1. Any information (either required or in addition to that asked for by the specifications) necessary to analyze your quotation; i.e., required submittals, literature, technical data, financial statements.
 - 2. Warranties and guarantees against defective materials and workmanship.

- d. **ALTERNATE QUOTE:** If the vendor elects to submit more than one quote, then the quotes should be submitted in separate envelopes and marked as indicated above. The second, or alternate quote should be marked as "Alternate".

- e. **QUOTES RECEIVED LATE:** It is the quoter's responsibility to ensure that his quote is received by the Division of Purchasing prior to the opening date and time specified. Any quote received after the opening date and time will be promptly returned to the quoter unopened. Lee County will not be responsible for quotes received late because of delays by a third party delivery service; i.e., U.S. Mail, UPS, Federal Express, etc.
- f. **QUOTE CALCULATION ERRORS:** In the event there is a discrepancy between the total quoted amount or the extended amounts and the unit prices quoted, the unit prices will prevail and the corrected sum will be considered the quoted price.
- g. **PAST PERFORMANCE:** All vendors will be evaluated on their past performance and prior dealings with Lee County (i.e., failure to meet specifications, poor workmanship, late delivery, etc.).
- h. **WITHDRAWAL OF QUOTE:** No quote may be withdrawn for a period of 90 days after the scheduled time for receiving quotes. A quote may be withdrawn prior to the quote-opening date and time. Such a request to withdraw should be made in writing to the Purchasing Director, who will approve or disapprove of the request.
- i. **COUNTY RESERVES THE RIGHT:** The County reserves the right to waive minor informalities in any quote; to reject any or all quotes with or without cause; and/or to accept the quote that in its judgment will be in the best interest of the County of Lee.
- j. **EXECUTION OF QUOTE:** All quotes shall contain the signature of an authorized representative of the quoter in the space provided on the quote proposal form. All quotes shall be typed or printed in ink. The bidder may not use erasable ink. All corrections made to the quote shall be initialed.

2. **ACCEPTANCE**

The materials and/or services delivered under the quote **shall** remain the property of the seller until a physical inspection and actual usage of these materials and/or services is accepted by the County and is to be in compliance with the terms herein, fully in accord with the specifications and of the highest quality. In the event the materials and/or services supplied to the County are found to be defective or do not conform to specifications, the County reserves the right to cancel the order upon written notice to the seller and return such product to the seller at the seller's expense.

3. **SUBSTITUTIONS**

Whenever in these specifications a brand name or make is mentioned, it is the intention of the County only to establish a grade or quality of materials and not to rule out other brands or makes of equality. However, if a product other than that specified is quote, it is the vendor's responsibility to name such product with his quote and to prove to the County that said product is equal to the product specified. Lee County **shall** be the sole judge as to whether a product being offered by the quoter is actually equivalent to the one being specified by the detailed specifications. (Note: This paragraph does not apply when it is determined that the technical requirements of this solicitation require only a specific product as stated in the detailed specifications.)

4. **RULES, REGULATIONS, LAWS, ORDINANCES & LICENSES**

The awarded vendor shall observe and obey all laws, ordinances, rules, and regulations, of the federal, state, and local government, which may be applicable to the supply of this product or service.

- a. Occupational License – Vendor shall submit within 10 calendar days after request.
- b. Specialty License(s) – Vendor shall possess at the time of the opening of the quote all necessary permits and/or license required for the sale of this product and/or service and upon the request of the County provide copies of licenses and/or permits within 10 calendar days after request.

5. **RECYCLED PRODUCTS**

It is the Lee County Board of County Commissioners' stated policy objective to "Ensure all departments are aware of the availability of recycled products..." (Administrative Code #AC-10-4). In an effort to provide the utmost opportunity for the use of recycled products by Lee County, vendors should list on their letterhead, all necessary information regarding any applicable recycled products they have available. Recycled products should meet all other specifications listed and have a minimum of 50%-recycled content. Whenever fiscally feasible, available recycled products will be purchased.

6. **WARRANTY/GUARANTY** (unless otherwise specified)

All materials and/or services furnished under this quote shall be warranted by the vendor to be free from defects and fit for the intended use.

7. **PRE-BID CONFERENCE**

A pre-bid conference will be held at the location, date, and time specified on the cover of this solicitation. Pre-bid conferences are generally non-mandatory, but it is highly recommended that everyone planning to submit a quote attend.

In the event a pre-bid conference is classified as mandatory, it will be so specified on the cover of this solicitation and it will be the responsibility of the quoter to ensure that they are represented at the pre-bid. Only those quoters who attend the pre-bid conference will be allowed to quote on this project.

8. **BIDDERS LIST MAINTENANCE**

A bidder should respond to "Request for Quotations" in order to be kept on the Bidder's List. Failure to respond to three different "request for quotations" may result in the vendor being removed from the Bidder's List. A bidder may do one of the following, in order to respond properly to the request:

- a. Submission of a quotation prior to the quote receipt deadline.
- b. Submission of a "no bid" notice prior to the quote receipt deadline.

9. **LEE COUNTY PAYMENT PROCEDURES**

All vendors are requested to mail one original invoice and one invoice copy to:

Lee County Finance Department
Post Office Box 2238
Fort Myers, FL 33902-2238

All invoices will be paid as directed by the Lee County payment procedure unless otherwise differently stated in the detailed specification portion of this quote.

Lee county will not be liable for request of payment deriving from aid, assistance, or help by any individual, vendor, quoter, or bidder for the preparation of these specifications.

Lee County is generally a tax-exempt entity subject to the provisions of the 1987 legislation regarding sales tax on services. Lee County will pay those taxes for which it is obligated, or it will provide a Certificate of Exemption furnished by the Department of Revenue. All contractors or quoters should include in their quote all sales or use taxes, which they will pay when making purchases of material or subcontractor's services.

10. **LEE COUNTY BID PROTEST PROCEDURE**

Any contractor/vendor/firm that has submitted a formal bid/quote/proposal to Lee County, and who is adversely affected by an intended decision with respect to the award of the formal bid/quote/proposal, shall file with the County's Purchasing Director or Public Works Director a written "Notice of Intent to File a Protest" not later than seventy-two (72) hours (excluding Saturdays, Sundays and Legal Holidays) after receipt of a "Notice of Intended Decision" from the County with respect to the proposed award of the formal bid/quote/proposal.

The "Notice of Intent to File a Protest" is one of two documents necessary to perfect Protest. The second document is the "Formal Written Protest", both documents are described below.

The "Notice of Intent to File a Protest" document shall state all grounds claimed for the Protest, and clearly indicate it as the "Notice of Intent to File a Protest". Failure to clearly indicate the Intent to file the Protest shall constitute a waiver of all rights to seek any further remedies provided for under this Protest Procedure.

The "Notice of Intent to File a Protest" shall be received ("stamped in") by the Purchasing Director or Public Works Director not later than Four o'clock (4:00) PM on the third working day following the day of receipt of the County's Notice of Intended Decision.

The affected party shall then file its Formal Written Protest within ten (10) calendar days after the time for the filing of the Notice of Intent to File a Protest has expired. Except as provided for in the paragraph below, upon filing of the Formal Written Protest, the contractor/vendor/firm shall post a bond, payable to the Lee County Board of County Commissioners in an amount equal to five percent (5%) of the total bid/quote/proposal, or Ten Thousand Dollars (\$10,000.00), whichever is less. Said bond shall be designated and held for payment of any costs that may be levied against the protesting contractor/vendor/firm by the Board of County Commissioners, as the result of a frivolous Protest.

A clean, Irrevocable Letter of Credit or other form of approved security, payable to the County, may be accepted. Failure to submit a bond, letter of credit, or other approved security simultaneously with the Formal Written Protest shall invalidate the protest, at which time the County may continue its procurement process as if the original "Notice of Intent to File a Protest" had never been filed. Any contractor/vendor/firm submitting the County's standard bond form (CSD: 514), along with the bid/quote/proposal, shall not be required to submit an additional bond with the filing of the Formal Written Protest.

The Formal Written Protest shall contain the following:

- County bid/quote/proposal identification number and title.
- Name and address of the affected party, and the title or position of the person submitting the Protest.
- A statement of disputed issues of material fact. If there are no disputed material facts, the Formal Protest must so indicate.
- A concise statement of the facts alleged, and of the rules, regulations, statues, or constitutional provisions, which entitle the affected party to relief.

- All information, documents, other materials, calculations, and any statutory or case law authority in support of the grounds for the Protest.
- A statement indicating the relief sought by the affected (protesting) party.
- Any other relevant information that the affected party deems to be material to Protest.

Upon receipt of a timely filed "Notice of Intent to File a Protest", the Purchasing Director or Public Works Director (as appropriate) may abate the award of the formal bid/quote/proposal as appropriate, until the Protest is heard pursuant to the informal hearing process as further outlined below, except and unless the County Manager shall find and set forth in writing, particular facts and circumstances that would require an immediate award of the formal bid/quote/proposal for the purpose of avoiding a danger to the public health, safety, or welfare. Upon such written finding by the County Manager, the County Manager may authorize an expedited Protest hearing procedure. The expedited Protest hearing shall be held within ninety-six (96) hours of the action giving rise to the contractor/vendor/firm's Protest, or as soon as may be practicable for all parties. The "Notice of Intent to File a Protest" shall serve as the grounds for the affected party's presentation and the requirements for the submittal of a formal, written Protest under these procedures, to include the requirement for a bond, shall not apply.

The Dispute Committee shall conduct an informal hearing with the protesting contractor/vendor/firm to attempt to resolve the Protest, within seven working days (excluding Saturdays, Sundays and legal holidays) from receipt of the Formal Written Protest. The Chairman of the Dispute Committee shall ensure that all affected parties may make presentations and rebuttals, subject to reasonable time limitations, as appropriate. The purpose of the informal hearing by the Dispute Committee, the protestor and other affected parties is to provide and opportunity: (1) to review the basis of the Protest; (2) to evaluate the facts and merits of the Protest; and (3) to make a determination whether to accept or reject the Protest.

Once a determination is made by the Dispute Committee with respect to the merits of the Protest, the Dispute Committee shall forward to the Board of County Commissioners its recommendations, which shall include relevant background information related to the procurement.

Upon receiving the recommendation from the Dispute Committee, the Board of County Commissioners shall conduct a hearing on the matter at a regularly scheduled meeting. Following presentations by the affected parties, the Board shall render its decision on the merits of the Protest.

If the Board's decision upholds the recommendation by the Dispute Committee regarding the award, and further finds that the Protest was either frivolous and/or lacked merit, the Board, at its discretion, may assess costs, charges, or damages associated with any delay of the award, or any costs incurred with regard to the protest. These costs, charges or damages may be deducted from the security (bond or letter of credit) provided by the contractor/vendor/firm. Any costs, charges or damages assessed by the Board in excess of the security shall be paid by the protesting contractor/vendor/firm within thirty (30) calendar days of the Board's final determination concerning the award.

All formal bid/quote/proposal solicitations shall set forth the following statement:

“FAILURE TO FOLLOW THE BID PROTEST PROCEDURE REQUIREMENTS WITHIN THE TIMEFRAMES AS PRESCRIBED HEREIN AND ESTABLISHED BY LEE COUNTY BOARD OF COUNTY COMMISSIONERS, FLORIDA, SHALL CONSTITUTE A WAIVER OF YOUR PROTEST AND ANY RESULTING CLAIMS.”

11. **PUBLIC ENTITY CRIME**

Any person or affiliate as defined by statute who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid or a contract to provide any goods or services to the County; may not submit a bid on a contract with the County for the construction or repair of a public building or a public work; may not submit bids or leases of real property to the County; may not be awarded or perform works as a contractor, supplier, subcontractor, or consultant under a contract with the County, and may not transact business with the County in excess of \$25,000.00 for a period of 36 months from the date of being placed on the convicted vendor list.

12. **QUALIFICATION OF QUOTERS** (unless otherwise noted)

Quotes will be considered only from firms normally engaged in the sale and distribution or provision of the services as specified herein. Quoters shall have adequate organization, facilities, equipment, and personnel to ensure prompt and efficient service to Lee County. The County reserves the right before recommending any award to inspect the facilities and organization; or to take any other action necessary to determine ability to perform is satisfactory, and reserves the right to reject quotes where evidence submitted or investigation and evaluation indicates an inability of the quoter to perform.

13. **MATERIAL SAFETY DATA SHEETS**

In accordance with Chapter 443 of the Florida Statutes, it is the vendor's responsibility to provide Lee County with Materials Safety Data Sheets on quoted materials, as may apply to this procurement.

14. **MISCELLANEOUS**

If a conflict exists between the General Conditions and the detailed specifications, then the detailed specifications shall prevail.

15. **WAIVER OF CLAIMS**

Once this contract expires, or final payment has been requested and made, the awarded contractor shall have no more than 30 days to present or file any claims against the County concerning this contract. After that period, the County will consider the Contractor to have waived any right to claims against the County concerning this agreement.

16. **AUTHORITY TO PIGGYBACK**

It is hereby made a precondition of any quote and a part of these specifications that the submission of any quote in response to this request constitutes a quote made under the same conditions, for the same price, and for the same effective period as this quote, to any other governmental entity.

17. **COUNTY RESERVES THE RIGHT**

a) **State Contract**

If applicable, the County reserves the right to purchase any of the items in this quote from State Contract Vendors if the prices are deemed lower on State Contract than the prices we receive in this quotation.

b) **Any Single Large Project**

The County, in its sole discretion, reserves the right to separately quote any project that is outside the scope of this quote, whether through size, complexity, or dollar value.

c) **Disadvantaged Business Enterprises**

The County, in its sole discretion, reserves the right to purchase any of the items in this quote from Disadvantage Business Enterprise vendor if the prices are determined to be in the best interest of the County, to assist the County in the fulfillment of any of the County's grant commitments to federal or state agencies.

The County further reserves the right to purchase any of the items in this quote from DBE's to fulfill the County's state policy toward DBE's as outlined in County Ordinance 88-45 and 90-04, as amended.

d) **Anti-Discrimination**

The vendor for itself, its successors in interest, and assignees, as part of the consideration there of covenant and agree that:

In the furnishing of services to the County hereunder, no person on the grounds of race, religion, color, age, sex, national origin, handicap or marital status shall be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination.

The vendor will not discriminate against any employee or applicant for employment because of race, religion, color, age, sex, national origin, handicap or marital status. The vendor will make affirmative efforts to insure that applicants are employed and that employees are treated during employment without regard to their race, religion, color, age, sex, national origin, handicap or marital status. Such action shall include, but not be limited to, acts of employment, upgrading, demotion or transfer; recruitment advertising; layoff or termination, rates of pay or other forms of compensation and selection for training, including apprenticeship.

Vendor agrees to post in a conspicuous place, available to employees and applicants for employment, notices setting forth the provisions of this anti-discrimination clause.

Vendor will provide all information and reports required by relevant regulations and/or applicable directives. In addition, the vendor shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the County to be pertinent to ascertain compliance. The vendor shall maintain and make available relevant data showing the extent to which members of minority groups are beneficiaries under these contracts.

Where any information required of the vendor is in the exclusive possession of another who fails or refuses to furnish this information, the vendor shall so certify to the County its effort made toward obtaining said information. The vendor shall remain obligated under this paragraph until the expiration of three (3) years after the termination of this contract.

In the event of breach of any of the above anti-discrimination covenants, the County shall have the right to impose sanctions as it may determine to be appropriate, including withholding payment to the vendor or canceling, terminating, or suspending this contract, in whole or in part.

Additionally, the vendor may be declared ineligible for further County contracts by rule, regulation or order of the Board of County Commissioners of Lee County, or as otherwise provided by law.

The vendor will send to each union, or representative of workers with which the vendor has a collective bargaining agreement or other contract of understanding, a notice informing the labor union of worker's representative of the vendor's commitments under this assurance, and shall post copies of the notice in conspicuous places available to the employees and the applicants for employment.

The vendor will include the provisions of this section in every subcontract under this contract to insure its provisions will be binding upon each subcontractor. The vendor will take such actions with respect to any subcontractor, as the contracting agency may direct, as a means of enforcing such provisions, including sanctions for non-compliance.

18. **AUDITABLE RECORDS**

The awarded vendor shall maintain auditable records concerning the procurement adequate to account for all receipts and expenditures, and to document compliance with the specifications. These records shall be kept in accordance with generally accepted accounting methods, and Lee County reserves the right to determine the record-keeping method required in the event of non-conformity. These records shall be maintained for two years after completion of the project and shall be readily available to County personnel with reasonable notice, and to other persons in accordance with the Florida Public Disclosure Statutes.

19. **DRUG FREE WORKPLACE**

Whenever two or more quotes/proposals, which are equal with respect to price, quality and service, are received for the procurement of commodities or contractual services, a quote/proposal received from a business that certifies that it has implemented a drug-free workplace program shall be given preference in the award process. In order to have a drug-free workplace program, a business shall comply with the requirements of Florida Statutes 287.087.

20. **REQUIRED SUBMITTALS**

Any submittals requested should be returned with the quote response. This information may be accepted after opening, but no later than 10 calendar days after request.

21. **TERMINATION**

Any agreement as a result of this quote may be terminated by either party giving thirty (30) calendar days advance written notice. The County reserves the right to

accept or not accept a termination notice submitted by the vendor, and no such termination notice submitted by the vendor shall become effective unless and until the vendor is notified in writing by the County of its acceptance.

The Purchasing Director may immediately terminate any agreement as a result of this quote for emergency purposes, as defined by the Lee County Purchasing and Payment Procedure Manual.

Any vendor who has voluntarily withdrawn from a formal quote/proposal without the County's mutual consent during the contract period shall be barred from further County procurement for a period of 180 days. The vendor may apply to the Board of Lee County Commissioners for waiver of this debarment. Such application for waiver of debarment must be coordinated with and processed by Purchasing.

22. **CONFIDENTIALITY**

Vendors should be aware that all submittals (including financial statements) provided with a quote/proposal are subject to public disclosure and will **not** be afforded confidentiality.

23. **ANTI-LOBBYING CLAUSE**

All firms are hereby placed on formal notice that neither the County Commissioners nor candidates for County Commission, nor any employees from the Lee County Government, Lee County staff members, nor any members of the Qualification/Evaluation Review Committee are to be lobbied, either individually or collectively, concerning this project. Firms and their agents who intend to submit qualifications, or have submitted qualifications, for this project are hereby placed on *formal notice* that they are ***not*** to contact County personnel for such purposes as holding meetings of introduction, meals, or meetings relating to the selection process outside of those specifically scheduled by the County for negotiations. Any such lobbying activities may cause immediate disqualification for this project.

24. **INSURANCE (AS APPLICABLE)**

Insurance shall be provided, per the attached insurance guide. Upon request, an insurance certificate complying with the attached guide may be required prior to award.

FORMAL QUOTATION NO.: Q-040024
**LEE COUNTY, FLORIDA
PROPOSAL QUOTE FORM
FOR THE ANNUAL PURCHASE OF
CHEMICALS FOR UTILITIES**

DATE SUBMITTED: _____

VENDOR NAME: _____

TO: The Board of County Commissioners
Lee County
Fort Myers, Florida

Having carefully examined the "General Conditions", and the "Detailed Specifications", all of which are contained herein, the Undersigned proposes to furnish the following which meet these specifications:

The undersigned acknowledges receipt of Addenda numbers:

GRAND TOTAL (ALL SECTIONS): \$ _____

WILL YOU DELIVER WITH YOUR OWN VEHICLE AS OPPOSED TO COMMON CARRIER?

YES _____ NO _____

SECTION 1, ANHYDROUS AMMONIA

Specify product name: _____ \$ _____ /150# cylinder

Specify product name: _____ \$ _____ /ton

MINIMUM ORDER QUANTITY: _____

SECTION 2, ANIONIC POLYMERS

Specify product name: _____ \$ _____ /50 lb bag

Manufacturer _____ **PolyFloc AP 1100P, or equal**

MINIMUM ORDER QUANTITY: _____

SECTION 3, AQUA AMMONIA 18%

Specify product name: _____ \$ _____ /gal.

Manufacturer _____

MINIMUM ORDER QUANTITY: _____

SECTION 4, BENTONITE CLAY ACCUFLOC SDG

Specify product name: _____ \$ _____ /lb

MINIMUM ORDER QUANTITY: _____

SECTION 5, CALCIUM HYPOCHLORITE 3 inch stabilized tablets

Specify product name: _____ \$ _____ /100# pail

MINIMUM ORDER QUANTITY: _____

SECTION 6, CITRIC ACID

Specify product name: _____ \$ _____ /50# bag

MINIMUM ORDER QUANTITY: _____

SECTION 7, HYDRATED LIME

Specify product name: _____ \$ _____ /50# bag

MINIMUM ORDER QUANTITY: _____

SECTION 8, HYDROCHLORIC ACID 31% (muriatic acid)

Specify product name: _____ \$ _____ /275 gal tote

Manufacturer _____

Specify product name: _____ \$ _____ /15 gal carboy

Manufacturer _____

Specify product name: _____ \$ _____ /1 gal jug

Manufacturer _____

MINIMUM ORDER QUANTITY: _____

SECTION 9, HYDROFLUOSILIC ACID 23%

Specify product name: _____ \$ _____ /totes

Specify product name: _____ \$ _____ /gal.

MINIMUM ORDER QUANTITY: _____

SECTION 10, POLYMER (LIQUID)

Specify product name: _____ \$ _____ /100# pail

MINIMUM ORDER QUANTITY: _____

SECTION 11, POTASSIUM PERMANGANATE

Specify product name: _____ \$ _____ /pail

MINIMUM ORDER QUANTITY: _____

SECTION 12, PYRO-PHOSPHATE

Specify product name: _____ \$ _____ /lb

MINIMUM ORDER QUANTITY: _____

SECTION 13, SODA ASH

Specify product name: _____ \$ _____ /ton

Specify product name: _____ \$ _____/50# bag

MINIMUM ORDER QUANTITY: _____

SECTION 14, SODIUM HYPOCHLORITE SOLUTION

Specify product name: _____ \$ _____/gallon

Specify product name: _____ \$ _____/55 gal. drum

MINIMUM ORDER QUANTITY: _____

SECTION 15, SODIUM METABISULFITE

Specify product name: _____ \$ _____/50# bag

MINIMUM ORDER QUANTITY: _____

SECTION 16, ZINC ORTHO- PHOSPHATE

Specify product name: _____ \$ _____/lb

MINIMUM ORDER QUANTITY: _____

TO BE STARTED WITHIN _____ CALENDAR DAYS AFTER RECEIPT OF AWARD AND PURCHASE ORDER.

Is your firm interested in being considered for the Local Vendor Preference?

Yes _____ No _____

If yes, then read the paragraph entitled "Local Vendor Preference" included in these specifications. Also complete the Local Vendor Preference Questionnaire and return with your quotation.

Quoters should carefully read all the terms and conditions of the specifications. Any representation of deviation or modification to the quote may be grounds to reject the quote.

Are there any modifications to the quote or specifications:

Yes _____ No _____

Failure to clearly identify any modifications in the space below or on a separate page may be grounds for the quoter being declared nonresponsive or to have the award of the quote rescinded by the County.

MODIFICATIONS:

Quoter shall submit his/her quote on the County's Proposal Quote Form, including the firm name and authorized signature. Any blank spaces on the Proposal Quote Form, qualifying notes or exceptions, counter offers, lack of required submittals, or signatures, on County's Form may result in the Quoter/Quote being declared non-responsive by the County.

ANTI-COLLUSION STATEMENT

THE BELOW SIGNED QUOTER HAS NOT DIVULGED TO, DISCUSSED OR COMPARED HIS QUOTE WITH OTHER QUOTERS AND HAS NOT COLLUDED WITH ANY OTHER QUOTER OR PARTIES TO A QUOTE WHATSOEVER. NOTE: NO PREMIUMS, REBATES OR GRATUITIES TO ANY EMPLOYEE OR AGENT ARE PERMITTED EITHER WITH, PRIOR TO, OR AFTER ANY DELIVERY OF MATERIALS. ANY SUCH VIOLATION WILL RESULT IN THE CANCELLATION AND/OR RETURN OF MATERIAL (AS APPLICABLE) AND THE REMOVAL FROM THE MASTER BIDDERS LIST.

FIRM NAME _____

BY (Printed): _____

BY (Signature): _____

TITLE: _____

FEDERAL ID # OR S.S.# _____

ADDRESS: _____

PHONE NO.: _____

FAX NO.: _____

CELLULAR PHONE/PAGER NO.: _____

LEE COUNTY OCCUPATIONAL LICENSE NUMBER: _____

E-MAIL ADDRESS: _____

REVISED: 7/28/00

FORMAL QUOTATION NO.: Q-040024
LEE COUNTY, FLORIDA
DETAILED SPECIFICATIONS
FOR THE ANNUAL PURCHASE OF
CHEMICALS FOR UTILITIES

SCOPE

The purpose of this quotation is to solicit prospective bidders to furnish and deliver various water and wastewater chemicals on an annual basis for use at Lee County Utilities.

TERM OF QUOTE

This quote shall be in effect for one year, or until new quotes are taken and awarded. This quote (or any portion thereof) has the option of being renewed for four additional one-year periods, upon mutual agreement of both parties, under the same terms and conditions.

DELIVERY REQUIREMENTS

Quotes are to be based on firm prices delivered F.O.B., as directed to the locations specified herein, Lee County, Florida.

The County reserves the right to add or delete delivery sites at its discretion at anytime throughout the term of this quote.

Delivery driver must present a photo I.D. upon delivery. The I.D. must show that the driver is an employee of either the trucking company or the awarded vendor. All personnel making deliveries must wear the appropriate personal protective equipment (PPE as required by the MSDS).

Lee County Utilities reserves the right to refuse a delivery if that delivery is not in the proper timeframe; the vendor has improper equipment to offload the delivery; and/or is taking improper safety precautions or has malfunctioning equipment.

When soda ash is delivered into a silo; the driver shall not blow off excessive air at the end of the load that would cause any type of air pollution to occur should they overpower the bag-house.

BASIS OF AWARD

Lee County reserves the right, at the Purchasing Director's discretion, not to award certain items on the Proposal Quote Form.

The basis of award may be by section or overall low quoter meeting specifications. It is not required to quote on all sections to be considered for an award. Lee County reserves the right to alter from this quote should a process or special condition deem it necessary. The new chemicals may or may not be selected through the current vendor.

Due to the diversity of items listed Lee County reserves the right to award this quote which best serves the interest of Lee County; i.e.: to a single vendor, to multiple vendors, or by a primary/secondary vendor basis, at Lee County's sole discretion.

Lee County reserves the right to reject unbalanced quotes (a quote where a normally low cost item is priced well out of the normal range).

SUBMITTALS

Vendor must have written proof of conformance as required in technical specifications.

NATIONAL RESPONSE CENTER

The bidder shall provide a detailed listing of all accidents, incidents, releases, spills, and National Response Center notifications ("safety incidents") for all chemicals it delivers or manufacturers for the past five (5) years.

The bidder shall also provide the names of any customers where its contract was terminated early (e.g., debarred) for safety, quality, or service issues for any product it supplies over the past five years. Failure to disclose references, terminations, or safety incidents will result in Bidder being disqualified from bidding on this product.

The Bidder shall also submit a list of at least ten (10) references to include phone numbers that use or have used its sodium hypochlorite at both water and wastewater treatment plants (at least five of each type) in the past two years. The Reference List shall list actual users at the water and wastewater plants and not purchasing agents. Additionally, the Bidder shall provide the names of any customers where its contract was terminated early (e.g., debarred) for safety, quality, or service issues for any product it supplies over the past five years. Failure to disclose references, terminations, or safety incidents will result in Bidder being disqualified from bidding on this product.

For purposes of this Bid, the term "Bidder" shall be defined as the vendor submitting the proposal and shall include all subsidiaries, affiliates, and subcontractors. As such, any requested documentation shall apply to all subsidiaries and affiliated companies as well as any subcontractors. In the event that a vendor is using a subcontractor to either manufacture or deliver the product, the requested items (e.g., references, terminations, and safety incidents) shall apply to the subcontractor as well.

MINIMUM ORDER QUANTITIES

On the Proposal Quote Form vendors must specify the minimum order quantity their firm requires for delivery. If Lee County requires less than the minimum order quantity stated by the awarded vendors on the Proposal Quote Form, Lee County reserves the right to purchase the material elsewhere.

PRICE ESCALATION

If the awarded vendor(s) experiences a major price increase from suppliers for items in this quotation, the vendor may submit a written request to increase pricing. All information necessary to review and analyze the request must be submitted to Lee County

Purchasing. Lee County shall have the right to grant the price increase, or re-quote, at the County's sole discretion. Should prices decrease, the same procedure shall apply.

QUANTITY PRICE BREAKS

If your firm can offer quantity price breaks to Lee County on any items listed, specify item(s), quantity breaks and pricing on company letterhead. The prices offered on the Proposal Quote Form will form the basis of award.

TRAINING SESSIONS

Each awarded supplier will be required to provide, at no additional cost to the County, two 4-hour training sessions each year, that meet the federal and state safety and right to know training requirements. The education and instruction of the County's operations personnel shall be by a qualified instructor familiar with the safe handling practices associated with the chemical being discussed. Session dates, times and course outlines should be submitted by the supplier as part of their bid package, and approved by the County. Failure to provide this service will be considered a default of the contract. The awarded vendor(s) shall be required to provide a letter certifying that the course outline meets the requirements listed above.

The training sessions will be held in one central location in Lee County which will be determined by Lee County Utilities. The awarded suppliers will be responsible for travel, lodging, meals and training materials costs.

SAFETY

The supplier's truck must be equipped to safely handle and unload product/products.

DELIVERY LOCATIONS AND CONTACTS

Corkscrew Water Treatment Plant
16101 Alico Road
Estero, FL 33913

Phone 239/267-8228
Fax 239/267-8268
Contact Person: Richard Hawes

Green Meadows Water Plant
13001 Alico Road
Fort Myers, FL 33913

Phone: (239) 267-1151
Fax: (239) 267-7105
Contact Person: Val Sikora

Waterway Water Plant
4271 Saint Claire Ave
Fort Myers, FL 33903

Phone: (239) 995-1861
Fax : (239) 995-0098
Contact Person: Lenny Sword

College Parkway Water Plant
7401 College Parkway
Fort Myers, FL 33907

Phone: (239) 936-0247
Fax: (239) 936-0549
Contact Person: Val Sikora

Waterway Estates WWTP
1667 Inlet Drive
N. Fort Myers, FL 33903

Phone: (239) 995-6585
Fax: (239) 995-0816
Contact Person : Michael Hansinger

Fiesta Village WWTP
1366 San Souci Drive
Fort Myers, FL 33919

Phone : (239) 481-1953
Fax: (239) 446-0515
Contact Person : Dennis Lang

Gateway Services WWTP
13240 Commerce Lakes Drive
Fort Myers, FL 33913

Phone: (239) 229-8698
Contact Person: Richard Blasetti

San Carlos WWTP
19910 S. Tamiami Trail
Estero, FL 33928

Phone: (239) 267-0387
Contact Person: Jim McPhillips

Three Oaks WWTP
18521 Three Oaks Pkwy.
Fort Myers, FL 33912

Phone: (239) 267-0387
Contact Person: Jim McPhillips

Pinewoods WTP
11950 Corkscrew Road
Estero, FL 33928

Phone: (239) 992-1319
Fax: (239) 992-9095
Contact Person: Damon Hardy

Bartow WTP
18513 Bartow Blvd.
Fort Myers, FL 33912

Phone: (239) 267-7747
Fax: (239) 267-7997
Contact Person: Damon Hardy

Olga WTP
1450 Werner Drive
Alva, FL 33920

Phone: (239) 694-4038
Fax: (239) 694-2370
Contact Person: John Gibson

Fort Myers Beach WWTP
17155 Pine Ridge Road
Fort Myers Beach, FL 33931

Phone: (239) 466-8039
Fax: (239) 466-3952
Contact Person: Cris Thornberry

High Point WWTP
9001 Sedgefield Road
Fort Myers, FL 33917

Phone: (239) 282-0025
Fax: (239) 282-0026
Contact Person : Mario Beauchamp

Pine Island WWTP
6928 Stringfellow Road
St. James City, FL 33956

Phone: (239) 282-0025
Fax: (239) 282-0026
Contact Person: Mario Beachamp

North Reservoir
7351 Samville Road
Fort Myers, FL 33917

Phone: (239) 694-4038
Fax: (239) 694-2370
Contact Person: John Gibson

LIFT STATIONS

Lift Station 332
1930 Custom Drive
Fort Myers, FL 33907

Lift Station 371
5300-5360 Summerlin Road
Fort Myers, FL 33919

Three Oaks Sewer Plant
18521 Three Oaks Pkwy.
Fort Myers, FL 33912
(two delivery locations)

Lift Station 263
806 South Street
Fort Myers, FL 33931

Lift Station 271
6345 Estero Blvd.
Fort Myers Beach, FL 33931

Detar Warehouse
5180 Tice Street
Fort Myers, FL 33905

Contact for all lift stations : David Sabiston – (239) 707-1875
Rich Simms – (239) 707-1880
Office – (239) 693-1729

DESIGNATED CONTACT

The awarded vendor shall appoint a person or persons to act as a primary contact for all County departments. This person or back-up shall be readily available during normal work hours by phone or in person, and shall be knowledgeable of the terms and procedures involved.

CONTRACT

A purchase order will serve as the contract. If your firm will require Lee County to sign a contract of any type, please include that contract with your quotation.

ADDITIONAL REQUIREMENTS

Vendors must provide MSDS sheets for all products to be provided, prior to startup of this contract.

Vendors agree to conform to any and all State and Federal regulations pertaining to chemicals, and to assist Lee County in doing so (Chapter 442 F.S.).

All Chemicals must be approved by the National Sanitation Foundation as applicable.
Please provide written proof with your quote package.

All products shall be provided exactly as specified. Any variations will not be accepted.

Vendors do not need to quote on all chemicals in order to be considered for award; however, each chemical has its own specific requirements which vary by location (delivery times, etc.) with which the awarded vendor must comply.

SUMMARY REPORTS

Upon completion of each six-month period of the quote, the awarded vendor(s) shall be responsible for furnishing a summary report to Purchasing. This report shall include the previous six months history, showing at a minimum, the following information:

- 1) Total dollars expended per item,
- 2) Total quantity of each item purchased.

MAJOR BREAKDOWNS/NATURAL DISASTERS

Lee County requires that the awarded vendor provide the name of a contact person and phone number which will afford Lee County access twenty-four hours per day, 365 days per year, of this product or service in the event of major breakdowns or natural disasters.

Lee County reserves the right to purchase the product or service listed in this quotation elsewhere in an emergency situation.

LOCAL BIDDER'S PREFERENCE

Note: In order for your firm to be considered for the local vendor preference, you must complete and return the attached "Local Vendor Preference Questionnaire" with your quotation.

The Lee County Local Bidder's Preference Ordinance No. 00-10 is being included as part of the award process for this project. As such, Lee County at its sole discretion, may choose to award a preference to any qualified "Local Contractor/Vendor" in an amount not to exceed 3 % of the total amount quoted by that firm.

"Local Contractor / Vendor" shall mean: a) any person, firm, partnership, company or corporation whose principal place of business in the sole opinion of the County, is located within the boundaries of Lee County, Florida; or b) any person, firm, partnership, company or corporation that has provided goods or services to Lee County on a regular basis for the preceding consecutive five (5) years, and that has the personnel, equipment and materials located within the boundaries of Lee County sufficient to constitute a present ability to perform the service or provide the goods.

The County reserves the exclusive right to compare, contrast and otherwise evaluate the qualifications, character, responsibility and fitness of all persons, firms, partnerships, companies or corporations submitting formal bids or formal quotes in any procurement for goods or services when making an award in the best interests of the County.

TECHNICAL SPECIFICATIONS

SECTION 1 - ANHYDROUS AMMONIA

A. Description - No AWWA Standard.

Ammonia is the compound formed by the chemical combination of the two gaseous elements, nitrogen and hydrogen, in the molar proportion of one part nitrogen to three parts hydrogen. This relationship is shown in the chemical symbol for ammonia, NH₃. On a weight basis, the ratio is fourteen parts nitrogen to three parts hydrogen or approximately 82% nitrogen to 28% hydrogen.

B. Physical Properties

1. Molecular symbol - NH₃
2. Molecular weight - 17.031
3. Boiling point at one atmosphere - 28F (33.3C)
4. Freezing point at one atmosphere - 107.9F (-77.7C)
5. Critical temperature - 271.4F (133.0C)
6. Critical pressure - 1657 psi (114.2)
7. Odor - pungent

C. Packaging

Since the transportation of ammonia as a vapor is not commercially economical, it is shipped and stored as a liquefied compressed gas. When filling the customers uninsulated tank, by volume, DOT regulations permit a maximum of 85%, if the temperature of the ammonia being loaded is not lower than 30F (-1.1C) and the filling is stopped at the first sign of ice forming on the outside of the tank.

D. Delivery Locations

Green Meadows WTP
13001 Alico Road
Fort Myers, FL 33913

Corkscrew WTP
16101 Alico Road
Fort Myers, FL 33913

Waterway Estates WTP
4271 St. Clair Ave. W.
North Fort Myers, FL 33903

Pinewoods WTP
11950 Corkscrew Road
Estero, FL 33928

Olga WTP
1450 Werner Drive
Alva, FL 33920

Bartow WTP
18513 Bartow Blvd
Fort Myers, FL 33912

College Parkway WTP (cylinders)
7401 College Parkway
Fort Myers, FL 33907

E. Amount

Estimated usage annually – 60.6 tons and 4 150# cylinders

F. Delivery Time

Shipments will be FOB Destination, and received between the hours of **8:00 AM and 4:00 PM, Monday through Friday**, within two (2) working days after verbal receipt of the order from Lee County Utilities. **College Parkway WTP delivery by appointment only.**

G. Delivery Amounts/Requirements

Green Meadows WTP;
min/max 500-2,500 lbs per delivery, 30' hose is required

Corkscrew WTP;
min/max 500-5,000 lbs per delivery, 30' hose is required

Waterway Estates WTP;
min/max 500-2,500 lbs per delivery, 20" hose is required

Pinewoods WTP;
min/max 500-2,000 lbs per delivery, 30" hose is required

Olga WTP;
min/max 500-2,500 lbs per delivery, 50' hose is required

Bartow WTP;
min/max 500-2,000 lbs per delivery, 30' hose is required

College Parkway WTP;
min/max 1-3 cylinders per delivery, liftgate truck is required

H. Successful Bidder

Vendor shall have a qualified representative who shall be available 24 hours a day, 7 days a week, in case of emergency.

Storage tanks will be provided by Lee County.

I. Pricing ANHYDROUS AMMONIA

Specify product name : _____ \$ _____/150# cylinder

Specify product name : _____ \$ _____/ton

SECTION 2 – ANIONIC POLYMERS

A. Description

A mildy anionic, white, dry, free-flowing powder used for flocculation in water softening units, where an organic synthetic material is essential

B. Physical Properties/Generic

- a. Appearance – odorless, white powder
- b. Charge in solution – Anionic 11% to 29%
- c. Relative molecular weight – 10,000,000
- d. Bulk density – 47 lbs/cu ft.
- e. PH 0.5% solution – 7.5
- f. Solution viscosity – tap water - .1%
- g. Flash point – less than 230 degrees C
- h. Maximum stock solution – 1%
- i. Particle size – 99% through 16 mesh

C. Packaging

Supplied in poly-lined multi-walled paper bags, net weight 50 lbs. Thirty bags per pallet or 1,500 lbs. Half pallets will be required for Waterway WTP

D. Delivery Location

Bartow WTP
18513 Bartow Blvd
Ft. Myers FL. 33912

E. Amount

Estimated usage annually – 24,000 lbs

F. Delivery Time

Ship will be FOB destination, and received between the hours of **8:00 AM and 4:00 PM, Monday through Friday**, Within (7) working days after verbal receipt of the order from Lee County.

G. Delivery Amounts/Requirements

Bartow WTP;
min/max 30 bags per delivery, pallet jack in truck and lift gate is required.

H. Successful Bidder

The low quoter meeting specifications shall be required to participate in the following testing procedures, prior to the final award of this quote being made. The vendor shall have a qualified representative visit the plant to conduct an extensive series of jar tests. (with the Lead Operator observing) to determine the ability of the polymer to properly coagulate and settle the suspended materials and

chemical precipitates within the treatment units. If the product proves to work in the jar test the vendor will supply, at no charge to Lee County, a quantity of their product to do a full scale plant trial for a minimum of seven days at the plants maximum flow. The vendor will have a representative on site during this time to assist in getting the proper dosages and feed rates set and to ensure the product is working correctly. During this time period, Lee County will get a first hand look at how the polymer works under actual conditions such as, varied flow rates, mixer speed changes, temperature and solid content variations. If the test is satisfactory, the award will then be made to that vendor.

I. Approvals

A letter from the Department of Health stating the product is approved for use in Lee County Water Plants must be submitted with the quote response, their address is as follows.

Environmental Engineering
DOH – Lee County Health Department
60 Danley Drive, Unit 1
Ft. Myers, Fl. 33907
(239) 939-4245

Pricing, ANIONIC POLYMER (50 lb bags)

Specify product name: _____ \$ _____ /50 lb bag

Manufacturer _____ **PolyFloc AP 1100P, or equal**

SECTION 3 – AQUA AMMONIA 18%

A. Description

Liquid Ammonia

B. Physical Properties

- a. Appearance – clear, colorless liquid
- b. Odor – strong pungent (ammonia) odor
- c. Specific Gravity (H₂O=1): 0.89 to 0.96
- d. Vapor Pressure (mmHG) (60 deg F) 420-475 for 29.7% NH₃
- e. Vapor Density (air =1) 0.6 @ 32 deg F
- f. Evaporation rate (Butyl Acetate =1) approximately 1
- g. Solubility in water – 100%

C. Packaging

Liquid, 275 gallon tote

D. Description Delivery Location

North Reservoir
7351 Samville Rd.
N. Ft. Myers, FL. 33917

E. Amount

Estimated usage annually – 8,000 gals

F. Delivery Time

Ship will be FOB destination, and received by appointment only. Call John Gibson at the Olga WTP to set up deliveries, within (7) working days after verbal receipt of the order from Lee County.

G. Delivery Amounts/Requirements

North Reservoir;
min/max 1-2 totes per delivery, truck with fork lift is required

H. Pricing, AQUA AMMONIA (liquid)

Specify product name : _____ \$ _____ /gal.

Manufacturer _____

SECTION 4 – BENTONITE CLAY ACCUFLOC SDG

A. Description
Beige powder

B. Physical Properties
a. Appearance – Beige powder
b. pH – (5% dispersion) 8.5 – 10.5
c. Moisture content 6-9%
d. Bulk Density (lbs/ft³) 55 (+- 2)
e. Specific Gravity 2.5 (+ - 0.5)

C. Packaging
50 Lb Bags

D. Delivery Location

Bartow WTP
18513 Bartow Blvd.
Ft. Myers, FL 33912

E. Amount
Estimated usage annually -500 lbs

F. Delivery Time
Ship will be FOB destination, and received between the hours of **8:00 AM and 4:00 PM, Monday through Friday**, Within (7) working days after verbal receipt of the order from Lee County.

G. Delivery Amounts/Requirements

Bartow WTP;
min/max 10 bags per delivery, pallet jack in truck is required

H. Pricing, BENTONITE CLAY ACCUFLOC SDG

Specify product name : _____ \$ _____/lb

SECTION 5 - CALCIUM HYPOCHLORITE 3 inch stabilized tablets

A. Description – AWWA B300-87

A white granular solid or tablet form product with a chlorine odor.

B. Physical Properties

1. Available chlorine minimum 65%
2. Bulk density granular –0.89 to 1.1 g/cc, tablets 1.16 to 1.90 g/cc
3. Solubility 1.2% @ 25 °C
4. Boiling point @ 760 MM HG: decomposes at 180°C
5. Heat of solution: slight exothermic
6. Stabilized HTH tablets 3 inch

C. Packaging

Packaging and shipping must conform to current regulations. Containers are to be of a disposable nature and packaged per 100 lbs.

D. Delivery Locations

Three Oaks WWTP
18521 Three Oaks Parkway
Fort Myers, FL 33912

E. Amount

Estimated usage annually - 24 (100# pails)

F. Delivery Time

Shipments will be FOB Destination, and received between the hours of **8:00 AM and 4:00 PM, Monday through Friday**, within eight (8) working days after verbal receipt of the order from Lee County.

G. Delivery Amounts/Requirements

Three Oaks WWTP;
min/max 3 inch tablets, 1-5 pails per delivery, liftgate truck is required

H. Pricing, CALCIUM HYPOCHLORITE 3 inch stabilized tablets

Specify product name : _____ \$ _____/100# pail

SECTION 6 – CITRIC ACID

A. Description

Odorless, white crystals

B. Physical Properties

- a. Appearance – Odorless, white crystals
- b. Solubility in water 59.2 g/100g at 68 F (20 C)

C. Packaging

50 Lb Bags

D. Delivery Location

Pinewoods WTP
11950 Corkscrew Rd.
Estero, FL. 33928

E. Amount

Estimated usage annually - 500 lbs

F. Delivery Time

Ship will be FOB destination, and received between the hours of **8:00 AM and 4:00 PM, Monday through Friday**, Within (7) working days after verbal receipt of the order from Lee County.

G. Delivery Amounts/Requirements

Pinewoods WTP;
min/max 10-40 bags per delivery, pallet jack in truck is required

H. Pricing, CITRIC ACID

Specify product name : _____ \$ _____ /50# bag

SECTION 7 - HYDRATED LIME

A. Description - AWWA B202-88

A very finely divided powder resulting from the hydration of quicklime with enough water to satisfy its chemical affinity. Consists of calcium hydroxide or a mixture of calcium hydroxide and magnesium hydroxide; 68% calcium oxide, not less than 62%.

B. Physical Properties

Consists of calcium hydroxide or a mixture of calcium hydroxide and magnesium hydroxide; 68% calcium oxide, not less than 62%.

C. Packaging

The quicklime shall be delivered in 50# bags at the designated plant storage facilities.

D. Delivery Locations

Gateway Services WWTP (bags)
13240 Commerce Lakes Dr
Fort Myers, FL 33913

Detar Warehouse (bags)
5180 Tice St.
Fort Myers, FL 33905

San Carlos WWTP (bags)
19910 South Tamiami Trail
Estero, FL 33928

Three Oaks WWTP (bags)
18521 Three Oaks Parkway
Fort Myers, FL 33912

E. Amount

Estimated usage annually – 6480 50# bags

F. Delivery Time

Shipments will be FOB Destination, and received between the hours of **8:00AM and 4:00PM, Monday through Friday**, within two (2) working days after verbal receipt of the order from Lee County Utilities. **Detar Warehouse has delivery by appointment only.**

G. Delivery Amounts/Requirements

Gateway Services WWTP;
min/max 40-80 bags per delivery, Liftgate truck is required

San Carlos WWTP;
min/max 40 bags per delivery, liftgate truck is required

Three Oaks WWTP;
min/max 40-120 bags per delivery, liftgate truck is required

Detar Warehouse;
min/max 40-80 bags per delivery, pallet jack in truck is required

H. Prospective Bidder

Prospective bidders shall supply a complete analysis and a representative sample of their product for independent verification to the County, prior to the award of the contract. The analysis shall include a sieve analysis showing the percent captured on each size sieve, ranging from a 3/4" sieve to a #200 sieve. There will also be an analysis presented, showing the available calcium oxide content, slaking time, temperature rise, and insoluble matter content. All analyses shall be done in accordance with AWWA Spec B-202 (latest edition).

I. Quality Testing

The basis for rejection or re-testing shall be the failure of the lime to produce a 50°F rise in temperature after three (3) minutes of slaking.

K. Pricing, HYDRATED LIME

Specify product name : _____ \$ _____ /50# bag

SECTION 8 – HYDROCHLORIC ACID 31% (Muriatic Acid)

A. Description

A strong mineral acid.

B. Physical Properties

- a. Appearance – liquid @ 20 deg C, 1 atm
- b. Molecular weight – 36.5
- c. Bulk density – 9.671- 9.908 lbs/gal
- d. Solubility (water) – very soluble
- e. Color – clear/slightly yellow
- f. Odor – sharp, pungent, irritant

C. Packaging

275 gallon totes
15 gallon carboys
1 gallon jugs

D. Delivery Location

North Reservoir
7351 Samville Rd.
N. Ft. Myers FL. 33917

Olga WTP
1450 Werner Dr.
Alva FL. 33920

Corkscrew WTP
16101 Alico Rd.
Ft. Myers FL. 33913

Greenmeadows WTP
13001 Alico Rd.
Ft. Myers FL. 33913

Waterway WTP
4271 St. Clair Ave.
N. Ft. Myers FL. 33903

College Pkwy WTP
7401 College Pkwy
Ft. Myers FL. 33907

Fiesta Village WWTP
1366 San Souci Dr.
Ft. Myers FL. 33919

E. Amount

Estimated usage annually – 4,800 gallons in 275 gal totes
420 gallons in 15 gal carboys
244 gallons in 1 gal jugs

F. Delivery Time

Shipments will be FOB destination, and received between the hours of **8:00 AM and 4:00 PM, Monday through Friday**, Within (7) working days after verbal receipt of the order from Lee County. North Reservoir and College Pkwy., **delivery by appointment only.**

G. Delivery Amounts/Requirements

North Reservoir;
min/max 1-2 totes per delivery, truck with fork lift is required.

Olga WTP;
min/max 1-2 totes per delivery, truck with fork lift is required.
min/max 1-2 carboys per delivery, truck with liftgate is required.

Corkscrew WTP;
min/max 4-8 cases of 4 gallons per case per delivery, pallet jack in truck is required.

Greenmeadows WTP;
min/max 1-3 carboys per delivery, truck with liftgate is required.

Waterway Estates WTP;
min/max 1-3 carboys per delivery, truck with lift gate is required.

College Pkwy WTP;
min/max 1-3 carboys per delivery, truck with lift gate is required.

Fiesta Village WWTP;
min/max 4-8 cases of 4 gallons per case per delivery, pallet jack in truck is required.

H. Pricing, HYDROCHLORIC ACID 31% (Muriatic Acid)

Specify product name: _____ \$ _____ /275 gal tote

Manufacturer _____

Specify product name: _____ \$ _____ /15 gal carboy

Manufacturer _____

Specify product name: _____ \$ _____ /1 gal jug

Manufacturer _____

SECTION 9 - HYDROFLUOSILIC ACID 23%

A. Description

Liquid, water white to straw yellow, with pungent odor.

B. Physical Properties

1. Must be clean and free of visible suspended matter
2. Contain between 20% and 30% hydrofluosilicic acid
3. Maximum dosage of 1.2 mg/L fluoride ion.

C. Packaging

Bulk; Packaging and shipping of all hydrofluosilicic acid solutions shall conform to all applicable local, state, and federal including US DOT regulations and applicable interstate regulations. Unloading shall be through a 2" quick couple fitting on the tank. Hoses for delivering from the tanker to the holding tank shall be the responsibility of the awarded vendor. **275 gallon transport tote are required for Pinewoods WTP and Bartow WTP.**

D. Delivery Locations

Pinewoods WTP (totes)
11950 Corkscrew Road
Estero, FL 33912

Bartow WTP (totes)
18513 Bartow Blvd
Estero, FL 33912

E. Amount –

Estimated usage annually – 16,900 gallons

F. Delivery Time

Shipments will be FOB Destination, and received between the hours of **8:00 AM And 4:00 PM, Monday through Friday**, within five (5) working days after verbal receipt of the order from Lee County Utilities.

G. Delivery Amounts/Requirements

Pinewoods WTP (totes);
min/max 1-2 transport totes per delivery, pallet jack in truck required

Pinewoods WTP (gals)
min/max 500-1000 gallons per delivery, pallet jack in truck required

Bartow WTP (totes);
min/max 1-2 transport totes per delivery, pallet jack in truck required

H. Pricing, HYDROFLUOSILICIC ACID 23%

Specify product name : _____ \$ _____/275 gal. Totes

Specify product name : _____ \$ _____/gal.

SECTION 10- POLYMERS (liquid)**A. Description**

Amine Odor; Colorless to Yellow Liquid

B. Physical Properties/Generic

- a. Appearance – Colorless to yellow liquid
- b. Specific Gravity (70F, 21C) 1.114
- c. Vapor Pressure (mmHG) ~ 18.0
- d. Vapor Density (air =1) < 1.00
- e. Freeze Point (F) 10
- f. PH as is. (approx.) 7.1
- g. Evaporation rate (Butyl Acetate =1) < 1.00

C. Packaging

Bulk, Liquid

D. Delivery Location

Bartow WTP
18513 Bartow Blvd.
Ft. Myers, FL 33912

E. Amount

Estimated usage annually – 2,000 lbs

F. Delivery Time

Ship will be FOB destination, and received between the hours of **8:00 AM and 4:00 PM, Monday through Friday**, Within (7) working days after verbal receipt of the order from Lee County.

G. Delivery Amounts/Requirements

Bartow WTP;
min/max 800 gals per delivery, 40' 2 inch hose required

H. Successful Bidder

The low quoter meeting specifications shall be required to participate in the following testing procedures, prior to the final award of this quote being made. The vendor shall have a qualified representative visit the plant to conduct an extensive series of jar tests. (with the Lead Operator observing) to determine the ability of the polymer to properly coagulate and settle the suspended materials and chemical precipitates within the treatment units. If the product proves to work in the jar test the vendor will supply, at no charge to Lee County, a quantity of their product to do a full scale plant trial for a minimum of seven days at the plants maximum flow. The vendor will have a representative on site during this time to assist in getting the proper dosages and feed rates set and to ensure the product is

working correctly. During this time period, Lee County will get a first hand look at how the polymer works under actual conditions such as, varied flow rates, mixer speed changes, temperature and solid content variations. If the test is satisfactory, the award will then be made to that vendor.

I. Approvals

A letter from the Department of Health stating the product is approved for use in Lee County Water Plants must be submitted with the quote response, their address is as follows.

Environmental Engineering
DOH – Lee County Health Department
60 Danley Drive, Unit 1
Ft. Myers, Fl. 33907
(239) 939-4245

J. Pricing, POLYMER (liquid)

Specify product name: _____ \$ _____/lb

Manufacturer _____ **Klaraid PC 1190P, or equal**

SECTION 11 – POTASSIUM PERMANGANATE

A. Description

Dark purple or bronze crystals, odorless

B. Physical Properties

- a. Appearance – Dark purple or bronze crystals, odorless
- b. Specific Grav. (15C) 2.7
- c. Freeze Point (F) 464
- d. Solubility in water 6.4% @ 20C

C. Packaging

55 lb pails

D. Delivery Locations

Bartow WTP
18513 Bartow Blvd.
Ft. Myers, FL. 33912

E. Amount

Estimated usage annually – 2,000 lbs

F. Delivery Time

Ship will be FOB destination, and received between the hours of **8:00 AM and 4:00 PM, Monday through Friday**, Within (7) working days after verbal receipt of the order from Lee County.

G. Delivery Amounts/Requirements

Bartow WTP;
min/max 5-20 pails per delivery, pallet jack in truck is required

H. Pricing, POTASSIUM PERMANGANATE

Specify product name: _____ \$ _____/pail

SECTION 12 – PYRO-PHOSPHATE

A. Description

Slight Odor; Colorless to Yellow, Liquid

B. Physical Properties

- a. Appearance – Clear, Colorless Liquid with no odor
- b. Specific Grav. (70F) 1.729
- c. Freeze Point (F) < -30.00
- d. Viscosity (cps 70F) 78
- e. Vapor Pressure (mmHG) ~ 15.0
- f. Vapor Density (air-1) < 1.00
- g. % Solubility (water) 100.0
- h. Flash Point (F) > 200 SETA (cc)
- i. pH as is (approx.) 13.0
- j. Evaporation rate <1.00
- k. As a minimum, 35% of the product is active Pyro-Phosphate

C. Description Packaging

Bulk delivery, gallons

D. Delivery Location

Pinewoods WTP
11950 Corkscrew Rd.
Estero, FL. 33928

E. Amount

Estimated usage annually - 18,000 lbs

F. Delivery Time

Ship will be FOB destination, and received between the hours of **8:00 AM and 4:00 PM, Monday through Friday**, Within (7) working days after verbal receipt of the order from Lee County.

G. Delivery Amounts/Requirements

Pinewoods WTP;
min/max 300-800 gals per delivery, 40' 2 inch hose is required

H. Pricing, PYRO-PHOSPHATE

Specify product name: _____ \$ _____/lb

SECTION 13 – SODA ASH

A. Description – AWWA B201-87 or latest revision

A white, dry free-flowing material.

B. Physical Properties

The Soda Ash furnished shall be a dry, white powder containing no large lumps or crystals and shall be free-flowing and suitable for storage in closed hoppers bins and for feeding with a standard dry feeder.

C. Chemical Composition

The material, as delivered, shall contain not less than 99 percent by weight sodium carbonate, or a sodium oxide equivalent of not less than 57.9 percent.

The insoluble matter shall not exceed 0.05 percent.

D. Impurities

General Impurities. The soda Ash supplied in accordance with this standard shall contain no soluble material or organic substances in quantities capable of producing deleterious or injurious effects on the health of those consuming a water that has been treated properly with the soda ash.

E. Packaging

The soda ash shall be delivered in bulk, by a hopper truck that can be unloaded pneumatically, or in 50# bags and palletized.

F. Delivery Locations

Fort Myers Beach WWTP
17155 Pine Ridge Road
Fort Myers Beach, FL 33931

Pine Island WWTP
6928 Stringfellow Rd
St. James City, FL 33956

Olga WTP
1450 Werner Drive
Ft. Myers, FL 33920

G. Delivery Amounts/Requirements

Fort Myers Beach WWTP;
min/max 2,400 lbs per delivery, truck and forklift is required

Pine Island WWTP;
min/max 10-40 bags per delivery, liftgate truck is required

Olga WTP; min/max 25 tons per delivery, 30' 4 inch hose is required

H. Amount

Annual Estimated usage annually – 98 (50# bags) and 200 (tons)

I. Delivery Times

Ship will be FOB destination, and received between the hours of **8:00 AM and 4:00 PM, Monday through Friday**, Within (7) working days after verbal receipt of the order from Lee County. **Pine Island WWTP delivery hours are between 11:00 AM and 2:00 PM.**

J. Pricing, SODA ASH

Specify product name: _____ \$ _____/ton

Specify product name: _____ \$ _____/50# bag

SECTION 14 - SODIUM HYPOCHLORITE SOLUTION

A. Description - Furnish liquid sodium hypochlorite (12.5 Trade Percent Available Chlorine) FOB destination in accordance with the American Water Works Association's (AWWA's) Standard B-300-99 for hypochlorite, except as modified or supplemented herein.

B. Physical Properties -

1. Tested and certified as meeting these specifications and those of the American National Standards Institute/National Sanitation Foundation Standard 60 (ANSI/NSF Standard 60), Drinking Water Treatment Chemicals Health Effects. It is the responsibility of the vendor to inform the Lee County that NSF certification has been revoked or lapsed within 24 hours of the time the supplier receives verbal or written notification. Loss of certification shall constitute sufficient ground for immediate termination of the contract.
2. Minimum of 120 Grams per Liter (GPL) available chlorine equivalent
3. Gallons required to obtain 1 lb of chlorine: .96 – 1.0 gallon
4. Product shall be a clear straw colored liquid with no visible cloudiness, impurities, or sediment.
5. Minimum of 0.1 percent by weight sodium hydroxide and a maximum of 0.5 weight percent sodium hydroxide.
6. Iron content: < 0.3 mg/L
7. Copper content: < 0.03 mg/L
8. Nickel content: < 0.03 mg/L
9. Chlorate content: < 2,000 mg/L
10. Bromate content: < 25 mg/L
11. Suspended solids shall be minimized and the shipments delivered shall achieve a filtration time of less than 3 minutes for 1000 ml when applying the "Suspended Solids Quality Test for Bleach Using the Vacuum Filtration" Method developed by Novatek.

C. Packaging – Bulk delivery, gallons

1. Packaging shall conform to all applicable federal and state standards.
2. The vendor shall be responsible for any spills resulting from the failure of its or its subcontractor's delivery equipment or from failure of attendant delivery personnel in the proper performance of their duties.
3. Proper performance shall require attendant delivery personnel's constant inspection and observation of unloading operations and knowledgeable response to problems or emergencies, which would most commonly be expected to occur. Lee County reserves the right to refuse any and all deliveries made with equipment that is poorly maintained.
4. The tanks or trailers shall be clean and free of residue that may contaminate the vendor's product or impede the unloading process. It

is the vendor's responsibility to verify the cleanliness of the transporting equipment before loading. All appurtenant valves, pumps, and discharge hoses used for the delivery of sodium hypochlorite shall be supplied by the vendor and shall be clean and free from contaminating material. Lee County may reject a load if the equipment is not properly cleaned. The vendor shall furnish Lee County an approved, leak-free connection device between the trailer and the Purchaser's intake receptacle. The vendor shall observe the entire filling operation at each delivery site and shall immediately report any spills caused during the filling operations. The vendor shall take immediate and appropriate actions to clean up any spilled liquid sodium hypochlorite. If the spill is not cleaned up, Lee County will hire a certified hazardous material handling company to clean up the spill, and the cost of such service will be charge to the vendor and deducted from the amount due to the Vendor. If the Lee County's unloading equipment such as pipe, valves or level indication and alarms should fail and the spillage is not the fault of the vendor or it's subcontractor, the vendor shall be relieved of cleanup of the spill.

D. Delivery Locations

Corkscrew WTP
16101 Alico Road
Fort Myers, FL 33913

Ft. Myers Beach WWTP
17155 Pine Ridge Road
Ft. Myers, FL 33908

Olga WTP
1450 Werner Drive
Alva, FL 33920

Pinewoods WTP
11950 Corkscrew Road
Estero, FL 33928

Bartow WTP
18513 Bartow Blvd
Ft. Myers, FL 33912

Greenmeadows WTP
13001 Alico Road
Ft. Myers, FL 33913

Waterway Estates WTP
4271 St. Clair Ave
N. Ft. Myers, FL 33903

Fiesta Village WWTP
1366 San Souci Drive
Fort Myers, FL 33919

High Point WWTP
9001 Sedgefield Road
N. Fort Myers, FL 33917

North Reservoir
7351 Samville Road
N. Fort Myers, FL 33917

Lift Station 263
806 South St
Fort Myers, FL 33931

Lift Station 271
6345 Estero Blvd
Fort Myers, FL 33931

E. Amount

Estimated usage annually – 1,070,444 gallons

F. Delivery Time

Shipments will be FOB Destination. Bulk deliveries shall be received based on individual plant's preference, which can be up to 24 hours per day, Monday through Sunday, within 48 hours after verbal receipt of order from Lee County Utilities. Highpoint WWTP, North Reservoir, Lift Stations 263 and 271, deliveries are by appointment only, Monday through Friday, between the hours of 8:00 AM and 4:00 PM, within three working days after verbal receipt of order from Lee County Utilities.

G. Delivery Amounts/Requirements

Green Meadows WTP;
min/max 1,000-5,000 gals per delivery, 20' 2 inch hose is required

Corkscrew WTP;
min/max 1,000-5,000 gals per delivery, 20' 2 inch hose is required

Waterway Estates WTP;
min/max 500-1,500 gals per delivery, 20' 2 inch hose is required

Pinewoods WTP;
min/max 800-1,200 gals per delivery, 20' 2 inch hose is required
Olga WT Plant;
min/max 1,000-5,000 gals per delivery, 20' 2 inch hose is required

Fort Myers WWTP
min/max 5,000 gals per delivery, 35' 2 inch hose is required

Fiesta Village WWTP;
5,000 gals per delivery, 30' 2 inch hose is required

Bartow WTP;
min/max 1,000 – 2,500 gal per delivery, 20' 2 inch hose is required

High Point WWTP
min/max 7-8 drums per delivery, liftgate truck is required

North Reservoir;
min/max 1,000 – 3,000 gallons per delivery, 20' 2 inch hose is required

Lift Station 263;
min/max 200 – 300 gallons per delivery, 20' 2 inch hose is required

Lift Station 271;
min/max 200 – 300 gallons per delivery, 20' 2 inch hose is required

H. Prospective Bidder

Prospective bidders shall submit a 1500 ml “chilled” sample of their product representative of their manufacturing process to one of the approved testing laboratories listed below for analysis. The laboratory shall ascertain whether the Bidder’s product is in compliance with this Specification for available chlorine, % sodium hypochlorite, excess caustic, iron, copper, nickel, chlorate, bromate and suspended solids (based on Filter Test time). The cost of the analysis shall be borne by Bidder. Failure to submit a sample or meet the requirements of the Specification shall result in Bidder being disqualified from bidding on this product.

Further, Lee County reserves the right to take samples from Bidder’s other customers to ensure that the Bidder’s sample and delivery equipment is in compliance with all the requirements of this Specification and such a sample shall be judged representative of the Bidder’s quality. In such event, Lee County shall bear the cost of any analysis. Based on this compliance check, failure to meet the requirements of this Specification shall result in Bidder being disqualified from bidding on this Product.

Sampling and testing shall be in accordance with EPA and AWWA B300-99 standards and in accordance with the documents titled, “The Weight Percent Determination of Sodium Hypochlorite, Sodium Hydroxide, And Sodium Chlorate in Liquid Bleach” and “Suspended Solids Quality Test for Bleach Using Vacuum Filtration”, distributed by Powell Fabrication and Manufacturing, Inc. and available at <http://www.powellfab.com>.

Approved Testing Laboratories

Any State certified lab that can provide the required testing may be used.

I. Quality Testing

At the sole discretion of the Lee County, the vendor’s delivery personnel (driver) may be asked to collect a sample of hypochlorite before the shipment is unloaded. In this case, Lee County will supply the sample container and the driver shall collect the sample from the tank truck and turn it over to Lee County. The sample shall be considered representative of the lot.

Lee County reserves the right to subject samples of the hypochlorite to quick analyses to ensure that it meets basic conditions of the specification with respect to specific gravity, weight percent of sodium hypochlorite, sodium hydroxide, and suspended solids. Any lot tested by the Lee County that fails to comply with the specifications shall constitute grounds for rejection of that lot. No payment shall be made for hypochlorite that is rejected. The vendor or its subcontractors shall allow 45 minutes for this testing to be completed. If testing can not be completed within the 45-minute period, Lee County shall allow the vendor to unload the shipment.

Lee County reserves the right to subject samples of the hypochlorite to complete analyses to ensure that it meets EPA specifications, AWWA B300-99 specifications, and the supplemental specifications included with this document. Repeat failures to comply with these specifications shall constitute grounds for cancellation of the contract between Lee County and vendor.

A certified report from the manufacturer shall be submitted for each sodium hypochlorite delivery to Lee County. The report shall contain the following data:

- ?? Date and Time of Manufacture
- ?? Percent by Weight (Sodium Hypochlorite and excess Sodium Hydroxide)
- ?? Specific Gravity (Referenced to a temperature)
- ?? Suspended Solids Test Time

No deliveries will be accepted by Lee County unless accompanied by said certified laboratory report for the specific batch of sodium hypochlorite delivered showing the above data and that it conforms to the required specifications.

At the start of the contract and every 90 days, the vendor shall utilize an outside testing agency acceptable to both the Lee County and the vendor to analyze a sample of the sodium hypochlorite delivered to Lee County. The vendor shall supply the sample container and the driver shall collect the sample from the tank truck. This sample will be given to Lee County at the time of the sample and Lee County shall forward the sample to the approved authorized testing agency. Any failure to comply with the specifications shall constitute grounds for cancellation of the contract between Lee County and vendor. Charges for the manufacturers certified report and all quarterly reports by outside testing agencies should be included in the bid price.

J. Pricing, SODIUM HYPOCHLORITE SOLUTION

Specify product name: _____ \$ _____ /gallon

Specify product name: _____ \$ _____ /55 gal. drum

SECTION 15 – SODIUM METABISULFITE

A. Description

Fine, white granular product, Pungent sulfur dioxide gas odor

B. Physical Properties

- a. Appearance – Fine, white granular product
- b. Specific Gravity 1.48
- c. pH 1% solution pH = 4.3 (approx.)
- d. Solubility in water 39% at 16 C

C. Packaging

50 Lb Bags

D. Delivery Location

Pinewoods WTP
11950 Corkscrew Rd.
Estero, FL. 33928

E. Amount

Estimated usage annually - 500 Lbs.

F. Delivery Time

Ship will be FOB destination, and received between the hours of **8:00 AM and 4:00 PM, Monday through Friday**, Within (7) working days after verbal receipt of the order from Lee County.

G. Delivery Amounts/Requirements

Pinewoods WTP; min/max 2-5 bags per delivery, pallet jack in truck is required

H. Pricing, SODIUM METABISULFITE

Specify product name: _____ \$ _____ /50# bag

SECTION 16 --ZINC ORTHO-PHOSPHATE

A. Description

Clear, Colorless Liquid with no odor

B. Physical Properties

Appearance – Clear, Colorless Liquid with no odor

Specific Grav. (70F) 1.398

Freeze Point (F) –13.00

Viscosity (cps 70F) 10

Vapor Pressure (mmHG) ~ 18.0

Vapor Density (air-1) < 1.00

% Solubility (water) 100.0

Flash Point (F) > 200 P-M (cc)

pH as is (approx.) 1.4

Evaporation rate <1.00

As a minimum, 35% of the product is zinc and orthophosphate
(zinc plus orthophosphate)

Ratio of phosphate to zinc is 3 to 1

C. Packaging

Bulk delivery, gallons

D. Delivery Locations

Pinewoods WTP

11950 Corkscrew Rd.

Estero, FL. 33928

E. Amount

Estimated usage annually - 49,000 lbs

F. Delivery Time

Ship will be FOB destination, and received between the hours of **8:00 AM and 4:00 PM, Monday through Friday**, Within (7) working days after verbal receipt of the order from Lee County.

G. Delivery Amounts/Requirements

Pinewoods WTP;

min/max 300-800 gals per delivery, 40' 2 inch hose is required

H. Pricing, ZINC ORTHO-PHOSPHATE

Specify product name: _____

\$ _____ /lb

MAJOR CONTRACT - where unusual hazards exist, or where contracts which exceed three-hundred-sixty-five (365) calendar days in duration, or where the project costs exceed \$500,000.

1. **Insurance Requirements:** *These are minimum requirements, which are subject to modification in response to operations involving a higher level of loss exposure.*
 - a. **Workers' Compensation** - Statutory benefits as defined by FS 440 encompassing all operations contemplated by this contract or agreement to apply to all owners, officers, and employees regardless of the number of employees. Individual employees may be exempted per State Law. Employers' liability will have minimum limits of:
 - \$1,000,000 per accident
 - \$1,000,000 disease limit
 - \$1,000,000 disease limit per employee
 - b. **Commercial General Liability** - Coverage shall apply to premises and/or operations, products and/or completed operations, independent contractors, contractual liability, and broad form property damage exposures with minimum limits of:
 - \$1,000,000 bodily injury per person (BI)
 - \$3,000,000 bodily injury per occurrence (BI)
 - \$1,000,000 property damage (PD) or
 - \$3,000,000 combined single limit (CSL) of BI and PD
 - c. **Business Auto Liability** - The following Automobile Liability will be required and coverage shall apply to all owned, hired and non-owned vehicles use with minimum limits of:
 - \$1,000,000 bodily injury per person (BI)
 - \$3,000,000 bodily injury per occurrence (BI)
 - \$1,000,000 property damage (PD) or
 - \$3,000,000 combined single limit (CSL) of BI and PD

**The required limit of liability shown in Major Contracts: 1.a; 1.b; 1.c; may be provided in the form of "Excess" or "Commercial Umbrella Insurance Policies." In which case, a "Following Form Endorsement" will be required on the "Excess Insurance Policy" or "Commercial Umbrella Policy."*

2. Verification of Coverage:

a. Ten (10) days prior to the commencement of any work under the contract a certificate of insurance will be provided to the Risk Manager for review and approval. The certificate shall provide for the following:

1. ***“Lee County, a political subdivision and Charter County of the State of Florida, its agents, employees, and public officials@ will be named as an “Additional Insured” on the General Liability policies.***
2. Lee County will be given thirty (30) days notice prior to cancellation or modification of any stipulated insurance. Such notification will be in writing by registered mail, return receipt requested and addressed to the Risk Manager (P.O. BOX 398 Ft. Myers, FL 33902).

3. Special Requirements:

- a. An appropriate “Indemnification” clause shall be made a provision of the contract.
- b. It is the responsibility of the general contractor to insure that all subcontractors comply with all insurance requirements.

FORMAL QUOTATION NO.: Q-040024
ATTACHMENT A
LOCAL VENDOR PREFERENCE QUESTIONNAIRE
(LEE COUNTY ORDINANCE NO. 00-10)

Instructions: Please complete either Part A or B whichever is applicable to your firm

PART A: VENDOR'S PRINCIPAL PLACE OF BUSINESS IS LOCATED WITHIN LEE COUNTY (Only complete Part A if your principal place of business is located within the boundaries of Lee County)

1. **What is the physical location of your principal place of business that is located within the boundaries of Lee County, Florida?**

2. What is the size of this facility (i.e. sales area size, warehouse, storage yard, etc.)

PART B: VENDOR'S PRINCIPAL PLACE OF BUSINESS IS NOT LOCATED WITHIN LEE COUNTY OR DOES NOT HAVE A PHYSICAL LOCATION WITHIN LEE COUNTY (Please complete this section.)

1. How many employees are available to service this contract? _____
2. Describe the types and amount of equipment you have available to service this contract.

3. Describe the types and amount of material stock that you have available to service this contract.

4. Have you provided goods or services to Lee County on a regular basis for the preceding, consecutive five years?

Yes _____

No _____

If yes, please provide your contractual history with Lee County for the past five, consecutive years. Attach additional pages if necessary.

FORMAL QUOTATION NO.: Q-040024
LEE COUNTY PURCHASING - BIDDERS CHECK LIST

IMPORTANT: Please read carefully and return with your bid proposal.
Please check off each of the following items as the necessary action is completed:

- 1. The Quote has been signed.
- 2. The Quote prices offered have been reviewed.
- 3. The price extensions and totals have been checked.
- 4. The original (must be manually signed) and 2 copies of the quote have been submitted.
- 5. Three (3) identical sets of descriptive literature, brochures and/or data (if required) have been submitted under separate cover.
- 6. All modifications have been acknowledged in the space provided.
- 7. All addendums issued, if any, have been acknowledged in the space provided.
- 8. Erasures or other changes made to the quote document have been initialed by the person signing the quote.
- 9. Bid Bond and/or certified Check, (if required) have been submitted with the quote in amounts indicated.
- 10. Any Delivery information required is included.
- 11. The mailing envelope has been addressed to:

MAILING ADDRESS	PHYSICAL ADDRESS
Lee County Purchasing	Lee County Purchasing
P.O. Box 398	1825 HENDRY STREET, 3 RD FLOOR
Ft. Myers, FL 33902-0398	Ft. Myers, FL 33901
- 12. The mailing envelope **MUST** be sealed and marked with:
 - Quote Number
 - Opening Date and/or Receiving Date
- 13. The quote will be mailed or delivered in time to be received no later than the specified opening date and time. (Otherwise quote cannot be considered or accepted.)
- 14. If submitting a "NO BID" please write quote number here _____ and check one of the following:
 - Do not offer this product Insufficient time to respond.
 - Unable to meet specifications (why)
 - Unable to meet bond or insurance requirement.
 - Other: _____

Company Name and Address:



LEE COUNTY
SOUTHWEST FLORIDA

BOARD OF COUNTY COMMISSIONERS

239.344.5450

Writer's Direct Dial Number: _____

Bob Janes
District One

Douglas R. St. Cerny
District Two

December 3, 2003

Ray Judah
District Three

Andrew W. Coy
District Four

John E. Albion
District Five

Donald D. Stilwell
County Manager

James G. Yaeger
County Attorney

Diana M. Parker
County Hearing Examiner

FORMAL QUOTE NO.: Q-040024
LEE COUNTY ADDENDUM NUMBER ONE
FOR THE PURCHASE OF CHEMICALS FOR UTILITIES

QUOTERS MUST ACKNOWLEDGE RECEIPT OF THIS ADDENDUM ON THE REVISED PROPOSAL QUOTE FORM, PAGE 12A.

The following changes have been made to this specification:

SEE ATTACHED PAGES 12A – 55A WHICH INCLUDE CHANGES MADE TO THIS QUOTE.

DELETE PAGES 12 – 55 AND REPLACE WITH PAGES 12A – 55A.

If you have any questions concerning this addendum, please contact me at the number listed above.

DIVISION OF PURCHASING

Chevone Peterson
Buyer

ADDENDUM #1/FORMAL QUOTATION NO.: Q-040024
LEE COUNTY, FLORIDA
PROPOSAL QUOTE FORM
FOR THE ANNUAL PURCHASE OF
CHEMICALS FOR UTILITIES

DATE SUBMITTED: _____

VENDOR NAME: _____

TO: The Board of County Commissioners
Lee County
Fort Myers, Florida

Having carefully examined the "General Conditions", and the "Detailed Specifications", all of which are contained herein, the Undersigned proposes to furnish the following which meet these specifications:

The undersigned acknowledges receipt of Addenda numbers:

GRAND TOTAL (ALL SECTIONS): \$ _____

WILL YOU DELIVER WITH YOUR OWN VEHICLE AS OPPOSED TO COMMON CARRIER?

YES _____ NO _____

SECTION 1, ANHYDROUS AMMONIA

Specify product name: _____

\$ _____ EA. X 60.6 tons = Total Cost \$ _____

SECTION 1A, ANHYDROUS AMMONIA

Specify product name: _____

\$ _____ EA. X 4 (150# cylinders) = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 2, ANIONIC POLYMERS

Specify product name: _____

\$ _____ EA. X 24,000 lbs = Total Cost \$ _____

Manufacturer _____ **PolyFloc AP 1100P, or equal**

MINIMUM ORDER QUANTITY: _____

SECTION 3, AQUA AMMONIA 18%

Specify product name: _____

\$ _____ EA. X 8,000 gallons = Total Cost \$ _____

Manufacturer _____

MINIMUM ORDER QUANTITY: _____

SECTION 4, BENTONITE CLAY ACCUFLOC SDG

Specify product name: _____

\$ _____ EA. X 500 lbs = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 5, CALCIUM HYPOCHLORITE 3 inch stabilized tablets

Specify product name: _____

\$ _____ EA. X 24 (100# pails) = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 6, CITRIC ACID

Specify product name: _____

\$ _____ EA. X 500 lbs = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 7, HYDRATED LIME

Specify product name: _____

\$ _____ EA. X 6,480 (50# bags) = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 8, HYDROCHLORIC ACID 31% (muriatic acid)

Specify product name: _____

\$ _____ EA. X 4,800 gallons (275 gal. totes) = Total Cost \$ _____

Manufacturer _____

SECTION 8A, HYDROCHLORIC ACID 31% (muriatic acid)

Specify product name: _____

\$ _____ EA. X 420 gallons (15 gal. carboys) = Total Cost \$ _____

Manufacturer _____

SECTION 8B, HYDROCHLORIC ACID 31% (muriatic acid)

Specify product name: _____

\$ _____ EA. X 244 gallons (1 gal. jugs) = Total Cost \$ _____

Manufacturer _____

MINIMUM ORDER QUANTITY: _____

SECTION 9, HYDROFLUOSILIC ACID 23%

Specify product name: _____

\$ _____ EA. X 13,000 gallons = Total Cost \$ _____

Specify product name : _____

MINIMUM ORDER QUANTITY: _____

SECTION 9A, HYDROFLUOSILIC ACID 23%

Specify product name: _____

\$ _____ EA. X 15 (275 gal. Totes) = Total Cost \$ _____

Specify product name : _____

SECTION 10, POLYMER (LIQUID)

Specify product name: _____

\$ _____ EA. X 2,000 lbs = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 11, POTASSIUM PERMANGANATE

Specify product name: _____

\$ _____ EA. X 2,000 lbs = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 12, PYRO-PHOSPHATE

Specify product name: _____

\$ _____ EA. X 18,000 lbs = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 13, SODA ASH

Specify product name: _____

\$ _____ EA. X 98 (50# bags) = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 13A, SODA ASH

Specify product name: _____

\$ _____ EA. X 200 tons = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 14, SODIUM HYPOCHLORITE SOLUTION

Specify product name: _____

\$ _____ EA. X 450,000 gallons = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 14A, SODIUM HYPOCHLORITE SOLUTION

Specify product name: _____

\$ _____ EA. X 20 (55 gal. drums) = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 15, SODIUM METABISULFITE

Specify product name: _____

\$ _____ EA. X 500 (50# bags) = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 16, ZINC ORTHO- PHOSPHATE

Specify product name: _____

\$ _____ EA. X 49,000 lbs = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

TO BE STARTED WITHIN _____ CALENDAR DAYS AFTER RECEIPT OF AWARD AND PURCHASE ORDER.

Is your firm interested in being considered for the Local Vendor Preference?

Yes _____ No _____

If yes, then read the paragraph entitled "Local Vendor Preference" included in these specifications. Also complete the Local Vendor Preference Questionnaire and return with your quotation.

Quoters should carefully read all the terms and conditions of the specifications. Any representation of deviation or modification to the quote may be grounds to reject the quote.

Are there any modifications to the quote or specifications:

Yes _____ No _____

Failure to clearly identify any modifications in the space below or on a separate page may be grounds for the quoter being declared nonresponsive or to have the award of the quote rescinded by the County.

MODIFICATIONS:

Quoter shall submit his/her quote on the County's Proposal Quote Form, including the firm name and authorized signature. Any blank spaces on the Proposal Quote Form, qualifying notes or exceptions, counter offers, lack of required submittals, or signatures, on County's Form may result in the Quoter/Quote being declared non-responsive by the County.

ANTI-COLLUSION STATEMENT

THE BELOW SIGNED QUOTER HAS NOT DIVULGED TO, DISCUSSED OR COMPARED HIS QUOTE WITH OTHER QUOTERS AND HAS NOT COLLUDED WITH ANY OTHER QUOTER OR PARTIES TO A QUOTE WHATSOEVER. NOTE: NO PREMIUMS, REBATES OR GRATUITIES TO ANY EMPLOYEE OR AGENT ARE PERMITTED EITHER WITH, PRIOR TO, OR AFTER ANY DELIVERY OF MATERIALS. ANY SUCH VIOLATION WILL RESULT IN THE CANCELLATION AND/OR RETURN OF MATERIAL (AS APPLICABLE) AND THE REMOVAL FROM THE MASTER BIDDERS LIST.

FIRM NAME _____

BY (Printed): _____

BY (Signature): _____

TITLE: _____

FEDERAL ID # OR S.S.# _____

ADDRESS: _____

PHONE NO.: _____

FAX NO.: _____

CELLULAR PHONE/PAGER NO.: _____

LEE COUNTY OCCUPATIONAL LICENSE NUMBER: _____

E-MAIL ADDRESS: _____

REVISED: 7/28/00

ADDENDUM #1/FORMAL QUOTATION NO.: Q-040024
LEE COUNTY, FLORIDA
DETAILED SPECIFICATIONS
FOR THE ANNUAL PURCHASE OF
CHEMICALS FOR UTILITIES

SCOPE

The purpose of this quotation is to solicit prospective bidders to furnish and deliver various water and wastewater chemicals on an annual basis for use at Lee County Utilities.

TERM OF QUOTE

This quote shall be in effect for one year, or until new quotes are taken and awarded. This quote (or any portion thereof) has the option of being renewed for four additional one-year periods, upon mutual agreement of both parties, under the same terms and conditions.

DELIVERY REQUIREMENTS

Quotes are to be based on firm prices delivered F.O.B., as directed to the locations specified herein, Lee County, Florida.

The County reserves the right to add or delete delivery sites at its discretion at anytime throughout the term of this quote.

Delivery driver must present a photo I.D. upon delivery. The I.D. must show that the driver is an employee of either the trucking company or the awarded vendor. All personnel making deliveries must wear the appropriate personal protective equipment (PPE as required by the MSDS).

Lee County Utilities reserves the right to refuse a delivery if that delivery is not in the proper timeframe; the vendor has improper equipment to offload the delivery; and/or is taking improper safety precautions or has malfunctioning equipment.

When soda ash is delivered into a silo; the driver shall not blow off excessive air at the end of the load that would cause any type of air pollution to occur should they overpower the bag-house.

BASIS OF AWARD

Lee County reserves the right, at the Purchasing Director's discretion, not to award certain items on the Proposal Quote Form.

The basis of award may be by section or overall low quoter meeting specifications. It is not required to quote on all sections; however, it is required to quote on all items within a section to be considered for an award of that section. Lee County reserves the right to alter from this quote should a process or special condition deem it necessary. The new chemicals may or may not be selected through the current vendor.

NOTE: Each section will be evaluated and awarded on an individual basis. For example: Section 1 will be evaluated and awarded separately from Section 1A.

Due to the diversity of items listed Lee County reserves the right to award this quote which best serves the interest of Lee County; i.e.: to a single vendor, to multiple vendors, or by a primary/secondary vendor basis, at Lee County's sole discretion.

Lee County reserves the right to reject unbalanced quotes (a quote where a normally low cost item is priced well out of the normal range).

SUBMITTALS

Vendor must have written proof of conformance as required in technical specifications.

NATIONAL RESPONSE CENTER

The bidder shall provide a detailed listing of all accidents, incidents, releases, spills, and National Response Center notifications ("safety incidents") for all chemicals it delivers or manufacturers for the past five (5) years.

The bidder shall also provide the names of any customers where its contract was terminated early (e.g., debarred) for safety, quality, or service issues for any product it supplies over the past five years. Failure to disclose references, terminations, or safety incidents will result in Bidder being disqualified from bidding on this product.

The Bidder shall also submit a list of at least ten (10) references to include phone numbers that use or have used its sodium hypochlorite at both water and wastewater treatment plants (at least five of each type) in the past two years. The Reference List shall list actual users at the water and wastewater plants and not purchasing agents. Additionally, the Bidder shall provide the names of any customers where its contract was terminated early (e.g., debarred) for safety, quality, or service issues for any product it supplies over the past five years. Failure to disclose references, terminations, or safety incidents will result in Bidder being disqualified from bidding on this product.

For purposes of this Bid, the term "Bidder" shall be defined as the vendor submitting the proposal and shall include all subsidiaries, affiliates, and subcontractors. As such, any requested documentation shall apply to all subsidiaries and affiliated companies as well as any subcontractors. In the event that a vendor is using a subcontractor to either manufacture or deliver the product, the requested items (e.g., references, terminations, and safety incidents) shall apply to the subcontractor as well.

MINIMUM ORDER QUANTITIES

On the Proposal Quote Form vendors must specify the minimum order quantity their firm requires for delivery. If Lee County requires less than the minimum order quantity stated by the awarded vendors on the Proposal Quote Form, Lee County reserves the right to purchase the material elsewhere.

PRICE ESCALATION

If the awarded vendor(s) experiences a major price increase from suppliers for items in this quotation, the vendor may submit a written request to increase pricing. All information necessary to review and analyze the request must be submitted to Lee County Purchasing. Lee County shall have the right to grant the price increase, or re-quote, at the County's sole discretion. Should prices decrease, the same procedure shall apply.

QUANTITY PRICE BREAKS

If your firm can offer quantity price breaks to Lee County on any items listed, specify item(s), quantity breaks and pricing on company letterhead. The prices offered on the Proposal Quote Form will form the basis of award.

TRAINING SESSIONS

Each awarded supplier will be required to provide, at no additional cost to the County, two 4-hour training sessions each year, that meet the federal and state safety and right to know training requirements. The education and instruction of the County's operations personnel shall be by a qualified instructor familiar with the safe handling practices associated with the chemical being discussed. Session dates, times and course outlines should be submitted by the supplier as part of their bid package, and approved by the County. Failure to provide this service will be considered a default of the contract. The awarded vendor(s) shall be required to provide a letter certifying that the course outline meets the requirements listed above.

The training sessions will be held in one central location in Lee County which will be determined by Lee County Utilities. The awarded suppliers will be responsible for travel, lodging, meals and training materials costs.

SAFETY

The supplier's truck must be equipped to safely handle and unload product/products.

DELIVERY LOCATIONS AND CONTACTS

Corkscrew Water Treatment Plant
16101 Alico Road
Estero, FL 33913

Phone 239/267-8228
Fax 239/267-8268
Contact Person: Richard Hawes

Green Meadows Water Plant
13001 Alico Road
Fort Myers, FL 33913

Phone: (239) 267-1151
Fax: (239) 267-7105
Contact Person: Val Sikora

Waterway Water Plant
4271 Saint Claire Ave
Fort Myers, FL 33903

Phone: (239) 995-1861
Fax : (239) 995-0098
Contact Person: Lenny Sword

College Parkway Water Plant
7401 College Parkway
Fort Myers, FL 33907

Phone: (239) 936-0247
Fax: (239) 936-0549
Contact Person: Val Sikora

ADDENDUM #1/FORMAL QUOTATION NO.: Q-040024

Waterway Estates WWTP
1667 Inlet Drive
N. Fort Myers, FL 33903

Phone: (239) 995-6585
Fax: (239) 995-0816
Contact Person : Michael Hansinger

Fiesta Village WWTP
1366 San Souci Drive
Fort Myers, FL 33919

Phone : (239) 481-1953
Fax: (239) 446-0515
Contact Person : Dennis Lang

Gateway Services WWTP
13240 Commerce Lakes Drive
Fort Myers, FL 33913

Phone: (239) 229-8698
Contact Person: Richard Blasetti

San Carlos WWTP
19910 S. Tamiami Trail
Estero, FL 33928

Phone: (239) 267-0387
Contact Person: Jim McPhillips

Three Oaks WWTP
18521 Three Oaks Pkwy.
Fort Myers, FL 33912

Phone: (239) 267-0387
Contact Person: Jim McPhillips

Pinewoods WTP
11950 Corkscrew Road
Estero, FL 33928

Phone: (239) 992-1319
Fax: (239) 992-9095
Contact Person: Damon Hardy

Bartow WTP
18513 Bartow Blvd.
Fort Myers, FL 33912

Phone: (239) 267-7747
Fax: (239) 267-7997
Contact Person: Damon Hardy

Olga WTP
1450 Werner Drive
Alva, FL 33920

Phone: (239) 694-4038
Fax: (239) 694-2370
Contact Person: John Gibson

Fort Myers Beach WWTP
17155 Pine Ridge Road
Fort Myers Beach, FL 33931

Phone: (239) 466-8039
Fax: (239) 466-3952
Contact Person: Cris Thornberry

High Point WWTP
9001 Sedgefield Road
Fort Myers, FL 33917

Phone: (239) 282-0025
Fax: (239) 282-0026
Contact Person : Mario Beauchamp

Pine Island WWTP
6928 Stringfellow Road
St. James City, FL 33956

Phone: (239) 282-0025
Fax: (239) 282-0026
Contact Person: Mario Beachamp

North Reservoir
7351 Samville Road
Fort Myers, FL 33917

Phone: (239) 694-4038
Fax: (239) 694-2370
Contact Person: John Gibson

LIFT STATIONS

Lift Station 332
1930 Custom Drive
Fort Myers, FL 33907

Lift Station 371
5300-5360 Summerlin Road
Fort Myers, FL 33919

Three Oaks Sewer Plant
18521 Three Oaks Pkwy.
Fort Myers, FL 33912
(two delivery locations)

Lift Station 263
806 South Street
Fort Myers, FL 33931

Lift Station 271
6345 Estero Blvd.
Fort Myers Beach, FL 33931

Detar Warehouse
5180 Tice Street
Fort Myers, FL 33905

Contact for all lift stations : David Sabiston – (239) 707-1875
Rich Simms – (239) 707-1880
Office – (239) 693-1729

DESIGNATED CONTACT

The awarded vendor shall appoint a person or persons to act as a primary contact for all County departments. This person or back-up shall be readily available during normal work hours by phone or in person, and shall be knowledgeable of the terms and procedures involved.

CONTRACT

A purchase order will serve as the contract. If your firm will require Lee County to sign a contract of any type, please include that contract with your quotation.

ADDITIONAL REQUIREMENTS

Vendors must provide MSDS sheets for all products to be provided, prior to startup of this contract.

Vendors agree to conform to any and all State and Federal regulations pertaining to chemicals, and to assist Lee County in doing so (Chapter 442 F.S.).

All Chemicals must be approved by the National Sanitation Foundation as applicable.
Please provide written proof with your quote package.

All products shall be provided exactly as specified. Any variations will not be accepted.

Vendors do not need to quote on all chemicals in order to be considered for award; however, each chemical has its own specific requirements which vary by location (delivery times, etc.) with which the awarded vendor must comply.

SUMMARY REPORTS

Upon completion of each six-month period of the quote, the awarded vendor(s) shall be responsible for furnishing a summary report to Purchasing. This report shall include the previous six months history, showing at a minimum, the following information:

- 1) Total dollars expended per item,
- 2) Total quantity of each item purchased.

MAJOR BREAKDOWNS/NATURAL DISASTERS

Lee County requires that the awarded vendor provide the name of a contact person and phone number which will afford Lee County access twenty-four hours per day, 365 days per year, of this product or service in the event of major breakdowns or natural disasters.

Lee County reserves the right to purchase the product or service listed in this quotation elsewhere in an emergency situation.

LOCAL BIDDER'S PREFERENCE

Note: In order for your firm to be considered for the local vendor preference, you must complete and return the attached "Local Vendor Preference Questionnaire" with your quotation.

The Lee County Local Bidder's Preference Ordinance No. 00-10 is being included as part of the award process for this project. As such, Lee County at its sole discretion, may choose to award a preference to any qualified "Local Contractor/Vendor" in an amount not to exceed 3 % of the total amount quoted by that firm.

"Local Contractor / Vendor" shall mean: a) any person, firm, partnership, company or corporation whose principal place of business in the sole opinion of the County, is located within the boundaries of Lee County, Florida; or b) any person, firm, partnership, company or corporation that has provided goods or services to Lee County on a regular basis for the preceding consecutive five (5) years, and that has the personnel, equipment and materials located within the boundaries of Lee County sufficient to constitute a present ability to perform the service or provide the goods.

The County reserves the exclusive right to compare, contrast and otherwise evaluate the qualifications, character, responsibility and fitness of all persons, firms, partnerships, companies or corporations submitting formal bids or formal quotes in any procurement for goods or services when making an award in the best interests of the County.

SECTION 1 AND 1A - ANHYDROUS AMMONIA

A. Description - No AWWA Standard.

Ammonia is the compound formed by the chemical combination of the two gaseous elements, nitrogen and hydrogen, in the molar proportion of one part nitrogen to three parts hydrogen. This relationship is shown in the chemical symbol for ammonia, NH₃. On a weight basis, the ratio is fourteen parts nitrogen to three parts hydrogen or approximately 82% nitrogen to 28% hydrogen.

B. Physical Properties

1. Molecular symbol - NH₃
2. Molecular weight - 17.031
3. Boiling point at one atmosphere - 28F (33.3C)
4. Freezing point at one atmosphere - 107.9F (-77.7C)
5. Critical temperature - 271.4F (133.0C)
6. Critical pressure - 1657 psi (114.2)
7. Odor - pungent

C. Packaging

Since the transportation of ammonia as a vapor is not commercially economical, it is shipped and stored as a liquefied compressed gas. When filling the customers uninsulated tank, by volume, DOT regulations permit a maximum of 85%, if the temperature of the ammonia being loaded is not lower than 30F (-1.1C) and the filling is stopped at the first sign of ice forming on the outside of the tank.

D. Delivery Locations

Green Meadows WTP
13001 Alico Road
Fort Myers, FL 33913

Corkscrew WTP
16101 Alico Road
Fort Myers, FL 33913

Waterway Estates WTP
4271 St. Clair Ave. W.
North Fort Myers, FL 33903

Pinewoods WTP
11950 Corkscrew Road
Estero, FL 33928

Olga WTP
1450 Werner Drive
Alva, FL 33920

Bartow WTP
18513 Bartow Blvd
Fort Myers, FL 33912

College Parkway WTP (cylinders)
7401 College Parkway
Fort Myers, FL 33907

E. Amount

Estimated usage annually – 60.6 tons and 4 150# cylinders

F. Delivery Time

Shipments will be FOB Destination, and received between the hours of **8:00 AM and 4:00 PM, Monday through Friday**, within two (2) working days after verbal receipt of the order from Lee County Utilities. **College Parkway WTP delivery by appointment only.**

G. Delivery Amounts/Requirements

Green Meadows WTP;
min/max 500-2,500 lbs per delivery, 30' hose is required

Corkscrew WTP;
min/max 500-5,000 lbs per delivery, 30' hose is required

Waterway Estates WTP;
min/max 500-2,500 lbs per delivery, 20" hose is required

Pinewoods WTP;
min/max 500-2,000 lbs per delivery, 30" hose is required

Olga WTP;
min/max 500-2,500 lbs per delivery, 50' hose is required

Bartow WTP;
min/max 500-2,000 lbs per delivery, 30' hose is required

College Parkway WTP;
min/max 1-3 cylinders per delivery, liftgate truck is required

H. Successful Bidder

Vendor shall have a qualified representative who shall be available 24 hours a day, 7 days a week, in case of emergency.

Storage tanks will be provided by Lee County.

SECTION 2 – ANIONIC POLYMERS

A. Description

A mildy anionic, white, dry, free-flowing powder used for flocculation in water softening units, where an organic synthetic material is essential

B. Physical Properties/Generic

- a. Appearance -- odorless, white powder
- b. Charge in solution -- Anionic 11% to 29%
- c. Relative molecular weight – 10,000,000
- d. Bulk density – 47 lbs/cu ft.
- e. PH 0.5% solution – 7.5
- f. Solution viscosity – tap water - .1%
- g. Flash point – less than 230 degrees C
- h. Maximum stock solution – 1%
- i. Particle size – 99% through 16 mesh

C. Packaging

Supplied in poly-lined multi-walled paper bags, net weight 50 lbs. Thirty bags per pallet or 1,500 lbs. Half pallets will be required for Waterway WTP

D. Delivery Location

Bartow WTP
18513 Bartow Blvd
Ft. Myers FL. 33912

E. Amount

Estimated usage annually – 24,000 lbs

F. Delivery Time

Ship will be FOB destination, and received between the hours of **8:00 AM and 4:00 PM, Monday through Friday**, Within (7) working days after verbal receipt of the order from Lee County.

G. Delivery Amounts/Requirements

Bartow WTP;
min/max 30 bags per delivery, pallet jack in truck and lift gate is required.

H. Successful Bidder

The low quoter meeting specifications shall be required to participate in the following testing procedures, prior to the final award of this quote being made. The vendor shall have a qualified representative visit the plant to conduct an extensive series of jar tests. (with the Lead Operator observing) to determine the ability of the polymer to properly coagulate and settle the suspended materials and

chemical precipitates within the treatment units. If the product proves to work in the jar test the vendor will supply, at no charge to Lee County, a quantity of their product to do a full scale plant trial for a minimum of seven days at the plants maximum flow. The vendor will have a representative on site during this time to assist in getting the proper dosages and feed rates set and to ensure the product is working correctly. During this time period, Lee County will get a first hand look at how the polymer works under actual conditions such as, varied flow rates, mixer speed changes, temperature and solid content variations. If the test is satisfactory, the award will then be made to that vendor.

I. Approvals

A letter from the Department of Health stating the product is approved for use in Lee County Water Plants must be submitted with the quote response, their address is as follows.

Environmental Engineering
DOH – Lee County Health Department
60 Danley Drive, Unit 1
Ft. Myers, Fl. 33907
(239) 939-4245

SECTION 3 – AQUA AMMONIA 18%

A. Description

Liquid Ammonia

B. Physical Properties

- a. Appearance – clear, colorless liquid
- b. Odor – strong pungent (ammonia) odor
- c. Specific Gravity (H₂O=1): 0.89 to 0.96
- d. Vapor Pressure (mmHG) (60 deg F) 420-475 for 29.7% NH₃
- e. Vapor Density (air =1) 0.6 @ 32 deg F
- f. Evaporation rate (Butyl Acetate =1) approximately 1
- g. Solubility in water – 100%

C. Packaging

Liquid, 275 gallon tote

D. Description Delivery Location

North Reservoir
7351 Samville Rd.
N. Ft. Myers, FL. 33917

E. Amount

Estimated usage annually – 8,000 gals

F. Delivery Time

Ship will be FOB destination, and received by appointment only. Call John Gibson at the Olga WTP to set up deliveries, within (7) working days after verbal receipt of the order from Lee County.

G. Delivery Amounts/Requirements

North Reservoir;
min/max 1-2 totes per delivery, truck with fork lift is required

SECTION 4 – BENTONITE CLAY ACCUFLOC SDG

A. Description

Beige powder

B. Physical Properties

- a. Appearance – Beige powder
- b. pH – (5% dispersion) 8.5 – 10.5
- c. Moisture content 6-9%
- d. Bulk Density (lbs/ft³) 55 (+- 2)
- e. Specific Gravity 2.5 (+ - 0.5)

C. Packaging

50 Lb Bags

D. Delivery Location

Bartow WTP
18513 Bartow Blvd.
Ft. Myers, FL 33912

E. Amount

Estimated usage annually -500 lbs

F. Delivery Time

Ship will be FOB destination, and received between the hours of **8:00 AM and 4:00 PM, Monday through Friday**, Within (7) working days after verbal receipt of the order from Lee County.

G. Delivery Amounts/Requirements

Bartow WTP;
min/max 10 bags per delivery, pallet jack in truck is required

SECTION 5 - CALCIUM HYPOCHLORITE 3 inch stabilized tablets

A. Description – AWWA B300-87

A white granular solid or tablet form product with a chlorine odor.

B. Physical Properties

1. Available chlorine minimum 65%
2. Bulk density granular –0.89 to 1.1 g/cc, tablets 1.16 to 1.90 g/cc
3. Solubility 1.2% @ 25 °C
4. Boiling point @ 760 MM HG: decomposes at 180^c
5. Heat of solution: slight exothermic
6. Stabilized HTH tablets 3 inch

C. Packaging

Packaging and shipping must conform to current regulations. Containers are to be of a disposable nature and packaged per 100 lbs.

D. Delivery Locations

Three Oaks WWTP
18521 Three Oaks Parkway
Fort Myers, FL 33912

E. Amount

Estimated usage annually - 24 (100# pails)

F. Delivery Time

Shipments will be FOB Destination, and received between the hours of **8:00 AM and 4:00 PM, Monday through Friday**, within eight (8) working days after verbal receipt of the order from Lee County.

G. Delivery Amounts/Requirements

Three Oaks WWTP;
min/max 3 inch tablets, 1-5 pails per delivery, liftgate truck is required

SECTION 6 – CITRIC ACID

A. Description

Odorless, white crystals

B. Physical Properties

- a. Appearance – Odorless, white crystals
- b. Solubility in water 59.2 g/100g at 68 F (20 C)

C. Packaging

50 Lb Bags

D. Delivery Location

Pinewoods WTP
11950 Corkscrew Rd.
Esteros, FL. 33928

E. Amount

Estimated usage annually - 500 lbs

F. Delivery Time

Ship will be FOB destination, and received between the hours of **8:00 AM and 4:00 PM, Monday through Friday**, Within (7) working days after verbal receipt of the order from Lee County.

G. Delivery Amounts/Requirements

Pinewoods WTP;
min/max 10-40 bags per delivery, pallet jack in truck is required

SECTION 7 - HYDRATED LIME

A. Description - AWWA B202-88

A very finely divided powder resulting from the hydration of quicklime with enough water to satisfy its chemical affinity. Consists of calcium hydroxide or a mixture of calcium hydroxide and magnesium hydroxide; 68% calcium oxide, not less than 62%.

B. Physical Properties

Consists of calcium hydroxide or a mixture of calcium hydroxide and magnesium hydroxide; 68% calcium oxide, not less than 62%.

C. Packaging

The quicklime shall be delivered in 50# bags at the designated plant storage facilities.

D. Delivery Locations

Gateway Services WWTP (bags)
13240 Commerce Lakes Dr
Fort Myers, FL 33913

Detar Warehouse (bags)
5180 Tice St.
Fort Myers, FL 33905

San Carlos WWTP (bags)
19910 South Tamiami Trail
Estero, FL 33928

Three Oaks WWTP (bags)
18521 Three Oaks Parkway
Fort Myers, FL 33912

E. Amount

Estimated usage annually – 6480 50# bags

F. Delivery Time

Shipments will be FOB Destination, and received between the hours of **8:00AM and 4:00PM, Monday through Friday**, within two (2) working days after verbal receipt of the order from Lee County Utilities. **Detar Warehouse has delivery by appointment only.**

G. Delivery Amounts/Requirements

Gateway Services WWTP;
min/max 40-80 bags per delivery, Liftgate truck is required

San Carlos WWTP;
min/max 40 bags per delivery, liftgate truck is required

Three Oaks WWTP;
min/max 40-120 bags per delivery, liftgate truck is required

Detar Warehouse;

min/max 40-80 bags per delivery, pallet jack in truck is required

H. Prospective Bidder

Prospective bidders shall supply a complete analysis and a representative sample of their product for independent verification to the County, prior to the award of the contract. The analysis shall include a sieve analysis showing the percent captured on each size sieve, ranging from a 3/4" sieve to a #200 sieve. There will also be an analysis presented, showing the available calcium oxide content, slaking time, temperature rise, and insoluble matter content. All analyses shall be done in accordance with AWWA Spec B-202 (latest edition).

I. Quality Testing

The basis for rejection or re-testing shall be the failure of the lime to produce a 50°F rise in temperature after three (3) minutes of slaking.

SECTION 8 THRU 8B – HYDROCHLORIC ACID 31% (Muriatic Acid)

A. Description

A strong mineral acid.

B. Physical Properties

- a. Appearance – liquid @ 20 deg C, 1 atm
- b. Molecular weight – 36.5
- c. Bulk density – 9.671- 9.908 lbs/gal
- d. Solubility (water) – very soluble
- e. Color – clear/slightly yellow
- f. Odor – sharp, pungent, irritant

C. Packaging

275 gallon totes
15 gallon carboys
1 gallon jugs

D. Delivery Location

North Reservoir
7351 Samville Rd.
N. Ft. Myers FL. 33917

Olga WTP
1450 Werner Dr.
Alva FL. 33920

Corkscrew WTP
16101 Alico Rd.
Ft. Myers FL. 33913

Greenmeadows WTP
13001 Alico Rd.
Ft. Myers FL. 33913

Waterway WTP
4271 St. Clair Ave.
N. Ft. Myers FL. 33903

College Pkwy WTP
7401 College Pkwy
Ft. Myers FL. 33907

Fiesta Village WWTP
1366 San Souci Dr.
Ft. Myers FL. 33919

E. Amount

Estimated usage annually – 4,800 gallons in 275 gal totes
420 gallons in 15 gal carboys
244 gallons in 1 gal jugs

F. Delivery Time

Shipments will be FOB destination, and received between the hours of **8:00 AM and 4:00 PM, Monday through Friday**, Within (7) working days after verbal receipt of the order from Lee County. North Reservoir and College Pkwy., **delivery by appointment only.**

G. Delivery Amounts/Requirements

North Reservoir;
min/max 1-2 totes per delivery, truck with fork lift is required.

Olga WTP;
min/max 1-2 totes per delivery, truck with fork lift is required.
min/max 1-2 carboys per delivery, truck with liftgate is required.

Corkscrew WTP;
min/max 4-8 cases of 4 gallons per case per delivery, pallet jack in truck is required.

Greenmeadows WTP;
min/max 1-3 carboys per delivery, truck with liftgate is required.

Waterway Estates WTP;
min/max 1-3 carboys per delivery, truck with lift gate is required.

College Pkwy WTP;
min/max 1-3 carboys per delivery, truck with lift gate is required.

Fiesta Village WWTP;
min/max 4-8 cases of 4 gallons per case per delivery, pallet jack in truck is required.

SECTION 9 AND 9A - HYDROFLUOSILIC ACID 23%

A. Description

Liquid, water white to straw yellow, with pungent odor.

B. Physical Properties

1. Must be clean and free of visible suspended matter
2. Contain between 20% and 30% hydrofluosilicic acid
3. Maximum dosage of 1.2 mg/L fluoride ion.

C. Packaging

Bulk; Packaging and shipping of all hydrofluosilicic acid solutions shall conform to all applicable local, state, and federal including US DOT regulations and applicable interstate regulations. Unloading shall be through a 2" quick couple fitting on the tank. Hoses for delivering from the tanker to the holding tank shall be the responsibility of the awarded vendor. **275 gallon transport tote are required for Pinewoods WTP and Bartow WTP.**

D. Delivery Locations

Pinewoods WTP (totes)
11950 Corkscrew Road
Estero, FL 33912

Bartow WTP (totes)
18513 Bartow Blvd
Estero, FL 33912

E. Amount –

Estimated usage annually – 16,900 gallons

F. Delivery Time

Shipments will be FOB Destination, and received between the hours of **8:00 AM And 4:00 PM, Monday through Friday**, within five (5) working days after verbal receipt of the order from Lee County Utilities.

G. Delivery Amounts/Requirements

Pinewoods WTP (totes);
min/max 1-2 transport totes per delivery, pallet jack in truck required

Pinewoods WTP (gals)
min/max 500-1000 gallons per delivery, pallet jack in truck required

Bartow WTP (totes);
min/max 1-2 transport totes per delivery, pallet jack in truck required

SECTION 10- POLYMERS (liquid)

A. Description

Amine Odor; Colorless to Yellow Liquid

B. Physical Properties/Generic

- a. Appearance – Colorless to yellow liquid
- b. Specific Gravity (70F, 21C) 1.114
- c. Vapor Pressure (mmHG) ~ 18.0
- d. Vapor Density (air =1) < 1.00
- e. Freeze Point (F) 10
- f. PH as is. (approx.) 7.1
- g. Evaporation rate (Butyl Acetate =1) < 1.00

C. Packaging

Bulk, Liquid

D. Delivery Location

Bartow WTP
18513 Bartow Blvd.
Ft. Myers, FL 33912

E. Amount

Estimated usage annually – 2,000 lbs

F. Delivery Time

Ship will be FOB destination, and received between the hours of **8:00 AM and 4:00 PM, Monday through Friday**, Within (7) working days after verbal receipt of the order from Lee County.

G. Delivery Amounts/Requirements

Bartow WTP;
min/max 800 gals per delivery, 40' 2 inch hose required

H. Successful Bidder

The low quoter meeting specifications shall be required to participate in the following testing procedures, prior to the final award of this quote being made. The vendor shall have a qualified representative visit the plant to conduct an extensive series of jar tests. (with the Lead Operator observing) to determine the ability of the polymer to properly coagulate and settle the suspended materials and chemical precipitates within the treatment units. If the product proves to work in the jar test the vendor will supply, at no charge to Lee County, a quantity of their product to do a full scale plant trial for a minimum of seven days at the plants maximum flow. The vendor will have a representative on site during this time to assist in getting the proper dosages and feed rates set and to ensure the product is

working correctly. During this time period, Lee County will get a first hand look at how the polymer works under actual conditions such as, varied flow rates, mixer speed changes, temperature and solid content variations. If the test is satisfactory, the award will then be made to that vendor.

I. Approvals

A letter from the Department of Health stating the product is approved for use in Lee County Water Plants must be submitted with the quote response, their address is as follows.

Environmental Engineering
DOH – Lee County Health Department
60 Danley Drive, Unit 1
Ft. Myers, Fl. 33907
(239) 939-4245

SECTION 11 – POTASSIUM PERMANGANATE

A. Description

Dark purple or bronze crystals, odorless

B. Physical Properties

- a. Appearance – Dark purple or bronze crystals, odorless
- b. Specific Grav. (15C) 2.7
- c. Freeze Point (F) 464
- d. Solubility in water 6.4% @ 20C

C. Packaging

55 lb pails

D. Delivery Locations

Bartow WTP
18513 Bartow Blvd.
Ft. Myers, FL. 33912

E. Amount

Estimated usage annually – 2,000 lbs

F. Delivery Time

Ship will be FOB destination, and received between the hours of **8:00 AM and 4:00 PM, Monday through Friday**, Within (7) working days after verbal receipt of the order from Lee County.

G. Delivery Amounts/Requirements

Bartow WTP;
min/max 5-20 pails per delivery, pallet jack in truck is required

SECTION 12 – PYRO-PHOSPHATE

A. Description

Slight Odor; Colorless to Yellow, Liquid

B. Physical Properties

- a. Appearance – Clear, Colorless Liquid with no odor
- b. Specific Grav. (70F) 1.729
- c. Freeze Point (F) < -30.00
- d. Viscosity (cps 70F) 78
- e. Vapor Pressure (mmHG) ~ 15.0
- f. Vapor Density (air-1) < 1.00
- g. % Solubility (water) 100.0
- h. Flash Point (F) > 200 SETA (cc)
- i. pH as is (approx.) 13.0
- j. Evaporation rate < 1.00
- k. As a minimum, 35% of the product is active Pyro-Phosphate

C. Description Packaging

Bulk delivery, gallons

D. Delivery Location

Pinewoods WTP
11950 Corkscrew Rd.
Estero, FL. 33928

E. Amount

Estimated usage annually - 18,000 lbs

F. Delivery Time

Ship will be FOB destination, and received between the hours of **8:00 AM and 4:00 PM, Monday through Friday**, Within (7) working days after verbal receipt of the order from Lee County.

G. Delivery Amounts/Requirements

Pinewoods WTP;
min/max 300-800 gals per delivery, 40' 2 inch hose is required

SECTION 13 AND 13A – SODA ASH

A. Description – AWWA B201-87 or latest revision

A white, dry free-flowing material.

B. Physical Properties

The Soda Ash furnished shall be a dry, white powder containing no large lumps or crystals and shall be free-flowing and suitable for storage in closed hoppers bins and for feeding with a standard dry feeder.

C. Chemical Composition

The material, as delivered, shall contain not less than 99 percent by weight sodium carbonate, or a sodium oxide equivalent of not less than 57.9 percent.

The insoluble matter shall not exceed 0.05 percent.

D. Impurities

General Impurities. The soda Ash supplied in accordance with this standard shall contain no soluble material or organic substances in quantities capable of producing deleterious or injurious effects on the health of those consuming a water that has been treated properly with the soda ash.

E. Packaging

The soda ash shall be delivered in bulk, by a hopper truck that can be unloaded pneumatically, or in 50# bags and palletized.

F. Delivery Locations

Fort Myers Beach WWTP
17155 Pine Ridge Road
Fort Myers Beach, FL 33931

Pine Island WWTP
6928 Stringfellow Rd
St. James City, FL 33956

Olga WTP
1450 Werner Drive
Ft. Myers, FL 33920

G. Delivery Amounts/Requirements

Fort Myers Beach WWTP;
min/max 2,400 lbs per delivery, truck and forklift is required

Pine Island WWTP;
min/max 10-40 bags per delivery, liftgate truck is required

Olga WTP; min/max 25 tons per delivery, 30' 4 inch hose is required

H. Amount

Annual Estimated usage annually – 98 (50# bags) and 200 (tons)

I. Delivery Times

Ship will be FOB destination, and received between the hours of **8:00 AM and 4:00 PM, Monday through Friday**, Within (7) working days after verbal receipt of the order from Lee County. **Pine Island WWTP delivery hours are between 11:00 AM and 2:00 PM.**

SECTION 14 AND 14A - SODIUM HYPOCHLORITE SOLUTION

A. Description - Furnish liquid sodium hypochlorite (12.5 Trade Percent Available Chlorine) FOB destination in accordance with the American Water Works Association's (AWWA's) Standard B-300-99 for hypochlorite, except as modified or supplemented herein.

B. Physical Properties -

1. Tested and certified as meeting these specifications and those of the American National Standards Institute/National Sanitation Foundation Standard 60 (ANSI/NSF Standard 60), Drinking Water Treatment Chemicals Health Effects. It is the responsibility of the vendor to inform the Lee County that NSF certification has been revoked or lapsed within 24 hours of the time the supplier receives verbal or written notification. Loss of certification shall constitute sufficient ground for immediate termination of the contract.
2. Minimum of 120 Grams per Liter (GPL) available chlorine equivalent
3. Gallons required to obtain 1 lb of chlorine: .96 – 1.0 gallon
4. Product shall be a clear straw colored liquid with no visible cloudiness, impurities, or sediment.
5. Minimum of 0.1 percent by weight sodium hydroxide and a maximum of 0.5 weight percent sodium hydroxide.
6. Iron content: < 0.3 mg/L
7. Copper content: < 0.03 mg/L
8. Nickel content: < 0.03 mg/L
9. Chlorate content: < 2,000 mg/L
10. Bromate content: < 25 mg/L
11. Suspended solids shall be minimized and the shipments delivered shall achieve a filtration time of less than 3 minutes for 1000 ml when applying the "Suspended Solids Quality Test for Bleach Using the Vacuum Filtration" Method developed by Novatek.

C. Packaging – Bulk delivery, gallons

1. Packaging shall conform to all applicable federal and state standards.
2. The vendor shall be responsible for any spills resulting from the failure of its or its subcontractor's delivery equipment or from failure of attendant delivery personnel in the proper performance of their duties.
3. Proper performance shall require attendant delivery personnel's constant inspection and observation of unloading operations and knowledgeable response to problems or emergencies, which would most commonly be expected to occur. Lee County reserves the right to refuse any and all deliveries made with equipment that is poorly maintained.
4. The tanks or trailers shall be clean and free of residue that may contaminate the vendor's product or impede the unloading process. It

is the vendor's responsibility to verify the cleanliness of the transporting equipment before loading. All appurtenant valves, pumps, and discharge hoses used for the delivery of sodium hypochlorite shall be supplied by the vendor and shall be clean and free from contaminating material. Lee County may reject a load if the equipment is not properly cleaned. The vendor shall furnish Lee County an approved, leak-free connection device between the trailer and the Purchaser's intake receptacle. The vendor shall observe the entire filling operation at each delivery site and shall immediately report any spills caused during the filling operations. The vendor shall take immediate and appropriate actions to clean up any spilled liquid sodium hypochlorite. If the spill is not cleaned up, Lee County will hire a certified hazardous material handling company to clean up the spill, and the cost of such service will be charge to the vendor and deducted from the amount due to the Vendor. If the Lee County's unloading equipment such as pipe, valves or level indication and alarms should fail and the spillage is not the fault of the vendor or it's subcontractor, the vendor shall be relieved of cleanup of the spill.

D. Delivery Locations

Pinewoods WTP
11950 Corkscrew Road
Estero, FL 33928

Bartow WTP
18513 Bartow Blvd
Ft. Myers, FL 33912

Greenmeadows WTP
13001 Alico Road
Ft. Myers, FL 33913

Waterway Estates WTP
4271 St. Clair Ave
N. Ft. Myers, FL 33903

Fiesta Village WWTP
1366 San Souci Drive
Fort Myers, FL 33919

High Point WWTP
9001 Sedgefield Road
N. Fort Myers, FL 33917

North Reservoir
7351 Samville Road
N. Fort Myers, FL 33917

Lift Station 263
806 South St
Fort Myers, FL 33931

Lift Station 271
6345 Estero Blvd
Fort Myers, FL 33931

E. Amount

Estimated usage annually – 451,100 gallons

F. Delivery Time

Shipments will be FOB Destination. Bulk deliveries shall be received based on individual plant's preference, which can be up to 24 hours per day, Monday

ADDENDUM #1/FORMAL QUOTATION NO.: Q-040024 through Sunday, within 48 hours after verbal receipt of order from Lee County Utilities. Highpoint WWTP, North Reservoir, Lift Stations 263 and 271, deliveries are by appointment only, Monday through Friday, between the hours of 8:00 AM and 4:00 PM, within three working days after verbal receipt of order from Lee County Utilities.

G. Delivery Amounts/Requirements

Green Meadows WTP;
min/max 1,000-5,000 gals per delivery, 20' 2 inch hose is required

Waterway Estates WTP;
min/max 500-1,500 gals per delivery, 20' 2 inch hose is required

Pinewoods WTP;
min/max 800-1,200 gals per delivery, 20' 2 inch hose is required

Fiesta Village WWTP;
5,000 gals per delivery, 30' 2 inch hose is required

Bartow WTP;
min/max 1,000 – 2,500 gal per delivery, 20' 2 inch hose is required

High Point WWTP
min/max 7-8 drums per delivery, liftgate truck is required

North Reservoir;
min/max 1,000 – 3,000 gallons per delivery, 20' 2 inch hose is required

Lift Station 263;
min/max 200 – 300 gallons per delivery, 20' 2 inch hose is required

Lift Station 271;
min/max 200 – 300 gallons per delivery, 20' 2 inch hose is required

H. Prospective Bidder

Prospective bidders shall submit a 1500 ml “chilled” sample of their product representative of their manufacturing process to one of the approved testing laboratories listed below for analysis. The laboratory shall ascertain whether the Bidder’s product is in compliance with this Specification for available chlorine, % sodium hypochlorite, excess caustic, iron, copper, nickel, chlorate, bromate and suspended solids (based on Filter Test time). The cost of the analysis shall be borne by Bidder. Failure to submit a sample or meet the requirements of the Specification shall result in Bidder being disqualified from bidding on this product.

Further, Lee County reserves the right to take samples from Bidder's other customers to ensure that the Bidder's sample and delivery equipment is in compliance with all the requirements of this Specification and such a sample shall be judged representative of the Bidder's quality. In such event, Lee County shall bear the cost of any analysis. Based on this compliance check, failure to meet the requirements of this Specification shall result in Bidder being disqualified from bidding on this Product.

Sampling and testing shall be in accordance with EPA and AWWA B300-99 standards and in accordance with the documents titled. "The Weight Percent Determination of Sodium Hypochlorite, Sodium Hydroxide, And Sodium Chlorate in Liquid Bleach" and "Suspended Solids Quality Test for Bleach Using Vacuum Filtration", distributed by Powell Fabrication and Manufacturing, Inc. and available at <http://www.powellfab.com>.

Approved Testing Laboratories

Any State certified lab that can provide the required testing may be used.

I.

Quality Testing

At the sole discretion of the Lee County, the vendor's delivery personnel (driver) may be asked to collect a sample of hypochlorite before the shipment is unloaded. In this case, Lee County will supply the sample container and the driver shall collect the sample from the tank truck and turn it over to Lee County. The sample shall be considered representative of the lot.

Lee County reserves the right to subject samples of the hypochlorite to quick analyses to ensure that it meets basic conditions of the specification with respect to specific gravity, weight percent of sodium hypochlorite, sodium hydroxide, and suspended solids. Any lot tested by the Lee County that fails to comply with the specifications shall constitute grounds for rejection of that lot. No payment shall be made for hypochlorite that is rejected. The vendor or its subcontractors shall allow 45 minutes for this testing to be completed. If testing can not be completed within the 45-minute period, Lee County shall allow the vendor to unload the shipment.

Lee County reserves the right to subject samples of the hypochlorite to complete analyses to ensure that it meets EPA specifications, AWWA B300-99 specifications, and the supplemental specifications included with this document. Repeat failures to comply with these specifications shall constitute grounds for cancellation of the contract between Lee County and vendor.

A certified report from the manufacturer shall be submitted for each sodium hypochlorite delivery to Lee County. The report shall contain the following data:

ADDENDUM #1/FORMAL QUOTATION NO.: Q-040024

- Date and Time of Manufacture
- Percent by Weight (Sodium Hypochlorite and excess Sodium Hydroxide)
- Specific Gravity (Referenced to a temperature)
- Suspended Solids Test Time

No deliveries will be accepted by Lee County unless accompanied by said certified laboratory report for the specific batch of sodium hypochlorite delivered showing the above data and that it conforms to the required specifications.

At the start of the contract and every 90 days, the vendor shall utilize an outside testing agency acceptable to both the Lee County and the vendor to analyze a sample of the sodium hypochlorite delivered to Lee County. The vendor shall supply the sample container and the driver shall collect the sample from the tank truck. This sample will be given to Lee County at the time of the sample and Lee County shall forward the sample to the approved authorized testing agency. Any failure to comply with the specifications shall constitute grounds for cancellation of the contract between Lee County and vendor. Charges for the manufacturers certified report and all quarterly reports by outside testing agencies should be included in the bid price.

SECTION 15 – SODIUM METABISULFITE

A. Description

Fine, white granular product, Pungent sulfur dioxide gas odor

B. Physical Properties

- a. Appearance – Fine, white granular product
- b. Specific Gravity 1.48
- a. pH 1% solution pH = 4.3 (approx.)
- b. Solubility in water 39% at 16 C

C. Packaging

50 Lb Bags

D. Delivery Location

Pinewoods WTP
11950 Corkscrew Rd.
Esterro, FL. 33928

E. Amount

Estimated usage annually - 500 Lbs.

F. Delivery Time

Ship will be FOB destination, and received between the hours of **8:00 AM and 4:00 PM, Monday through Friday**, Within (7) working days after verbal receipt of the order from Lee County.

G. Delivery Amounts/Requirements

Pinewoods WTP; min/max 2-5 bags per delivery, pallet jack in truck is required

SECTION 16 –ZINC ORTHO-PHOSPHATE

A. Description

Clear, Colorless Liquid with no odor

B. Physical Properties

Appearance – Clear, Colorless Liquid with no odor

Specific Grav. (70F) 1.398

Freeze Point (F) –13.00

Viscosity (cps 70F) 10

Vapor Pressure (mmHG) ~ 18.0

Vapor Density (air-1) < 1.00

% Solubility (water) 100.0

Flash Point (F) > 200 P-M (cc)

pH as is (approx.) 1.4

Evaporation rate <1.00

As a minimum, 35% of the product is zinc and orthophosphate
(zinc plus orthophosphate)

Ratio of phosphate to zinc is 3 to 1

C. Packaging

Bulk delivery, gallons

D. Delivery Locations

Pinewoods WTP

11950 Corkscrew Rd.

Estero, FL. 33928

E. Amount

Estimated usage annually - 49,000 lbs

F. Delivery Time

Ship will be FOB destination, and received between the hours of **8:00 AM and 4:00 PM, Monday through Friday**, Within (7) working days after verbal receipt of the order from Lee County.

G. Delivery Amounts/Requirements

Pinewoods WTP;

min/max 300-800 gals per delivery, 40' 2 inch hose is required

MAJOR CONTRACT - where unusual hazards exist, or where contracts which exceed three-hundred-sixty-five (365) calendar days in duration, or where the project costs exceed \$500,000.

1. **Insurance Requirements**: *These are minimum requirements, which are subject to modification in response to operations involving a higher level of loss exposure.*
 - a. **Workers' Compensation** - Statutory benefits as defined by FS 440 encompassing all operations contemplated by this contract or agreement to apply to all owners, officers, and employees regardless of the number of employees. Individual employees may be exempted per State Law. Employers' liability will have minimum limits of:

\$1,000,000 per accident
\$1,000,000 disease limit
\$1,000,000 disease limit per employee
 - b. **Commercial General Liability** - Coverage shall apply to premises and/or operations, products and/or completed operations, independent contractors, contractual liability, and broad form property damage exposures with minimum limits of:

\$1,000,000 bodily injury per person (BI)
\$3,000,000 bodily injury per occurrence (BI)
\$1,000,000 property damage (PD) or
\$3,000,000 combined single limit (CSL) of BI and PD
 - c. **Business Auto Liability** - The following Automobile Liability will be required and coverage shall apply to all owned, hired and non-owned vehicles use with minimum limits of:

\$1,000,000 bodily injury per person (BI)
\$3,000,000 bodily injury per occurrence (BI)
\$1,000,000 property damage (PD) or
\$3,000,000 combined single limit (CSL) of BI and PD

**The required limit of liability shown in Major Contracts: 1.a; 1.b; 1.c; may be provided in the form of "Excess" or "Commercial Umbrella Insurance Policies." In which case, a "Following Form Endorsement" will be required on the "Excess Insurance Policy" or "Commercial Umbrella Policy."*

2. Verification of Coverage:

a. Ten (10) days prior to the commencement of any work under the contract a certificate of insurance will be provided to the Risk Manager for review and approval. The certificate shall provide for the following:

1. ***“Lee County, a political subdivision and Charter County of the State of Florida, its agents, employees, and public officials@ will be named as an “Additional Insured” on the General Liability policies.***
2. Lee County will be given thirty (30) days notice prior to cancellation or modification of any stipulated insurance. Such notification will be in writing by registered mail, return receipt requested and addressed to the Risk Manager (P.O. BOX 398 Ft. Myers, FL 33902).

3. Special Requirements:

- a. An appropriate “Indemnification” clause shall be made a provision of the contract.
- b. It is the responsibility of the general contractor to insure that all subcontractors comply with all insurance requirements.

ADDENDUM #1/FORMAL QUOTATION NO.: Q-040024
ATTACHMENT A
LOCAL VENDOR PREFERENCE QUESTIONNAIRE
(LEE COUNTY ORDINANCE NO. 00-10)

Instructions: Please complete either Part A or B whichever is applicable to your firm

PART A: VENDOR'S PRINCIPAL PLACE OF BUSINESS IS LOCATED WITHIN LEE COUNTY (Only complete Part A if your principal place of business is located within the boundaries of Lee County)

1. **What is the physical location of your principal place of business that is located within the boundaries of Lee County, Florida?**

2. What is the size of this facility (i.e. sales area size, warehouse, storage yard, etc.)

PART B: VENDOR'S PRINCIPAL PLACE OF BUSINESS IS NOT LOCATED WITHIN LEE COUNTY OR DOES NOT HAVE A PHYSICAL LOCATION WITHIN LEE COUNTY (Please complete this section.)

1. How many employees are available to service this contract? _____
2. Describe the types and amount of equipment you have available to service this contract.

3. Describe the types and amount of material stock that you have available to service this contract.

4. Have you provided goods or services to Lee County on a regular basis for the preceding, consecutive five years?

Yes _____

No _____

If yes, please provide your contractual history with Lee County for the past five, consecutive years. Attach additional pages if necessary.

ADDENDUM #1/FORMAL QUOTATION NO.: Q-040024
LEE COUNTY PURCHASING - BIDDERS CHECK LIST

IMPORTANT: Please read carefully and return with your bid proposal.
Please check off each of the following items as the necessary action is completed:

- 1. The Quote has been signed.
- 2. The Quote prices offered have been reviewed.
- 3. The price extensions and totals have been checked.
- 4. The original (must be manually signed) and 2 copies of the quote have been submitted.
- 5. Three (3) identical sets of descriptive literature, brochures and/or data (if required) have been submitted under separate cover.
- 6. All modifications have been acknowledged in the space provided.
- 7. All addendums issued, if any, have been acknowledged in the space provided.
- 8. Erasures or other changes made to the quote document have been initialed by the person signing the quote.
- 9. Bid Bond and/or certified Check, (if required) have been submitted with the quote in amounts indicated.
- 10. Any Delivery information required is included.

11. The mailing envelope has been addressed to:

MAILING ADDRESS

Lee County Purchasing
P.O. Box 398 or
Ft. Myers, FL 33902-0398

PHYSICAL ADDRESS

Lee County Purchasing
1825 HENDRY STREET, 3RD FLOOR
Ft. Myers, FL 33901

- 12. The mailing envelope **MUST** be sealed and marked with:
Quote Number
Opening Date and/or Receiving Date
- 13. The quote will be mailed or delivered in time to be received no later than the specified opening date and time. (Otherwise quote cannot be considered or accepted.)
- 14. If submitting a "NO BID" please write quote number here _____
and check one of the following:
 Do not offer this product Insufficient time to respond.
 Unable to meet specifications (why)
 Unable to meet bond or insurance requirement.
Other: _____

Company Name and Address:

ADDENDUM #1/FORMAL QUOTATION NO.: Q-040024
LEE COUNTY, FLORIDA
PROPOSAL QUOTE FORM
FOR THE ANNUAL PURCHASE OF
CHEMICALS FOR UTILITIES

ATTACHMENT

3

DATE SUBMITTED: 12/12/03

VENDOR NAME: NALCO Company

TO: The Board of County Commissioners
Lee County
Fort Myers, Florida

Having carefully examined the "General Conditions", and the "Detailed Specifications", all of which are contained herein, the Undersigned proposes to furnish the following which meet these specifications:

The undersigned acknowledges receipt of Addenda numbers:

1

GRAND TOTAL (ALL SECTIONS): \$ 67,180⁰⁰

WILL YOU DELIVER WITH YOUR OWN VEHICLE AS OPPOSED TO COMMON CARRIER?

YES _____ NO

SECTION 1, ANHYDROUS AMMONIA

Specify product name: No BID

\$ No BID EA. X 60.6 tons = Total Cost \$ No BID

SECTION 1A, ANHYDROUS AMMONIA

Specify product name: No BID

\$ No BID EA. X 4 (150# cylinders) = Total Cost \$ No BID

MINIMUM ORDER QUANTITY: N/A

SECTION 2, ANIONIC POLYMERS

Specify product name: 8173 PULU *etc*

\$ 1.24/16 EA. X 24,000 lbs = Total Cost \$ 29,760⁰⁰

Manufacturer NALCO Company PolyFloc AP 1100P, or equal

MINIMUM ORDER QUANTITY: FULL PALLETS (30 BAGS) FOR BARTON
HAIF PALLETS (15 BAGS) FOR WATERWAY ESTATES

SECTION 3, AQUA AMMONIA 18%

Specify product name: NO BID

\$ NO BID EA. X 8,000 gallons = Total Cost \$ NO BID

Manufacturer N/A

MINIMUM ORDER QUANTITY: N/A

SECTION 4, BENTONITE CLAY ACCUFLOC SDG

Specify product name: NO BID

\$ NO BID EA. X 500 lbs = Total Cost \$ NO BID

MINIMUM ORDER QUANTITY: N/A

SECTION 5, CALCIUM HYPOCHLORITE 3 inch stabilized tablets

Specify product name: NO BID

\$ NO BID EA. X 24 (100# pails) = Total Cost \$ NO BID

MINIMUM ORDER QUANTITY: NO BID

SECTION 6, CITRIC ACID

Specify product name: NO BID

\$ NO BID EA. X 500 lbs = Total Cost \$ NO BID

MINIMUM ORDER QUANTITY: N/A

SECTION 7, HYDRATED LIME

Specify product name: NO BID

\$ NO BID EA. X 6,480 (50# bags) = Total Cost \$ NO BID

MINIMUM ORDER QUANTITY: N/A

SECTION 8, HYDROCHLORIC ACID 31% (muriatic acid)

Specify product name: NO BID

\$ NO BID EA. X 4,800 gallons (275 gal. totes) = Total Cost \$ NO BID

Manufacturer N/A

SECTION 8A, HYDROCHLORIC ACID 31% (muriatic acid)

Specify product name: NO BID

\$ NO BID EA. X 420 gallons (15 gal. carboys) = Total Cost \$ NO BID

Manufacturer N/A

SECTION 8B, HYDROCHLORIC ACID 31% (muriatic acid)

Specify product name: NO BID

\$ NO BID EA. X 244 gallons (1 gal. jugs) = Total Cost \$ NO BID

Manufacturer N/A

MINIMUM ORDER QUANTITY: N/A

SECTION 9, HYDROFLUOSILIC ACID 23%

Specify product name: No Bid

\$ No Bid EA. X 13,000 gallons = Total Cost \$ No Bid

Specify product name : N/A

MINIMUM ORDER QUANTITY: N/A

SECTION 9A, HYDROFLUOSILIC ACID 23%

Specify product name: No Bid

\$ No Bid EA. X 15 (275 gal. Totes) = Total Cost \$ No Bid

Specify product name : N/A

SECTION 10, POLYMER (LIQUID)

Specify product name: 71259

\$ 0.750/lb. EA. X 2,000 lbs = Total Cost \$ 1,500⁰⁰

MINIMUM ORDER QUANTITY: 800 gallons / 7,120 lbs.

SECTION 11, POTASSIUM PERMANGANATE

Specify product name: No Bid

\$ No Bid EA. X 2,000 lbs = Total Cost \$ No Bid

MINIMUM ORDER QUANTITY: N/A

SECTION 12, PYRO-PHOSPHATE

Specify product name: C-2

\$ 0.580/lb. EA. X 18,000 lbs = Total Cost \$ 10,440⁰⁰

MINIMUM ORDER QUANTITY: 300 gallons / 4,350 lbs.

SECTION 13, SODA ASH

Specify product name: No Bid

\$ No Bid EA. X 98 (50# bags) = Total Cost \$ No Bid

MINIMUM ORDER QUANTITY: N/A

SECTION 13A, SODA ASH

Specify product name: No Bid

\$ No Bid EA. X 200 tons = Total Cost \$ No Bid

MINIMUM ORDER QUANTITY: N/A

SECTION 14, SODIUM HYPOCHLORITE SOLUTION

Specify product name: No Bid

\$ No Bid EA. X 450,000 gallons = Total Cost \$ No Bid

MINIMUM ORDER QUANTITY: N/A

SECTION 14A, SODIUM HYPOCHLORITE SOLUTION

Specify product name: No Bid

\$ No Bid EA. X 20 (55 gal. drums) = Total Cost \$ No Bid

MINIMUM ORDER QUANTITY: N/A

SECTION 15, SODIUM METABISULFITE

Specify product name: No Bid

\$ No Bid EA. X 500 (50# bags) = Total Cost \$ No Bid

MINIMUM ORDER QUANTITY: N/A

SECTION 16, ZINC ORTHO- PHOSPHATE

Specify product name: C-9

\$ 0.520/lb EA. X 49,000 lbs = Total Cost \$ 25,480⁰⁰

MINIMUM ORDER QUANTITY: 300 gallons / 3,990 lbs.

TO BE STARTED WITHIN 3-5 CALENDAR DAYS AFTER RECEIPT OF AWARD AND PURCHASE ORDER.

Is your firm interested in being considered for the Local Vendor Preference?

Yes _____ No ✓

If yes, then read the paragraph entitled "Local Vendor Preference" included in these specifications. Also complete the Local Vendor Preference Questionnaire and return with your quotation.

Quoters should carefully read all the terms and conditions of the specifications. Any representation of deviation or modification to the quote may be grounds to reject the quote.

Are there any modifications to the quote or specifications:

Yes _____ No ✓

Failure to clearly identify any modifications in the space below or on a separate page may be grounds for the quoter being declared nonresponsive or to have the award of the quote rescinded by the County.

MODIFICATIONS:

None

Quoter shall submit his/her quote on the County's Proposal Quote Form, including the firm name and authorized signature. Any blank spaces on the Proposal Quote Form, qualifying notes or exceptions, counter offers, lack of required submittals, or signatures, on County's Form may result in the Quoter/Quote being declared non-responsive by the County.

ANTI-COLLUSION STATEMENT

THE BELOW SIGNED QUOTER HAS NOT DIVULGED TO, DISCUSSED OR COMPARED HIS QUOTE WITH OTHER QUOTERS AND HAS NOT COLLUDED WITH ANY OTHER QUOTER OR PARTIES TO A QUOTE WHATSOEVER. NOTE: NO PREMIUMS, REBATES OR GRATUITIES TO ANY EMPLOYEE OR AGENT ARE PERMITTED EITHER WITH, PRIOR TO, OR AFTER ANY DELIVERY OF MATERIALS. ANY SUCH VIOLATION WILL RESULT IN THE CANCELLATION AND/OR RETURN OF MATERIAL (AS APPLICABLE) AND THE REMOVAL FROM THE MASTER BIDDERS LIST.

FIRM NAME NALCO Company
BY (Printed): Mikki Gentry
BY (Signature): [Signature]
TITLE: INSIDE SALES Representative
FEDERAL ID # OR S.S.# 361520480
ADDRESS: 1601 W. DIEHL RD.
NAPERVILLE, IL 60563
PHONE NO.: 630-305-2676 1482
FAX NO.: 630-305-2646
CELLULAR PHONE/PAGER NO.: N/A

LEE COUNTY OCCUPATIONAL LICENSE NUMBER: 78-11-00281-38-0 STATE OF FL
E-MAIL ADDRESS: NLCLAY@NALCO.COM Registration

REVISED: 7/28/00

ADDENDUM #1/FORMAL QUOTATION NO.: Q-040024
ATTACHMENT A
LOCAL VENDOR PREFERENCE QUESTIONNAIRE
(LEE COUNTY ORDINANCE NO. 00-10)

Instructions: Please complete either Part A or B whichever is applicable to your firm

PART A: VENDOR'S PRINCIPAL PLACE OF BUSINESS IS LOCATED WITHIN LEE COUNTY (Only complete Part A if your principal place of business is located within the boundaries of Lee County)

1. **What is the physical location of your principal place of business that is located within the boundaries of Lee County, Florida?**

N/A

2. **What is the size of this facility (i.e. sales area size, warehouse, storage yard, etc.)**

N/A

PART B: VENDOR'S PRINCIPAL PLACE OF BUSINESS IS NOT LOCATED WITHIN LEE COUNTY OR DOES NOT HAVE A PHYSICAL LOCATION WITHIN LEE COUNTY (Please complete this section.)

1. **How many employees are available to service this contract?** See Attached

2. **Describe the types and amount of equipment you have available to service this contract.**

Fully Staffed Manufacturing Plants
& Distribution Centers
(SEE ATTACHED)

3. **Describe the types and amount of material stock that you have available to service this contract.**

1 Billion Kilos of Product in
North America Alone (See Attached)

4. Have you provided goods or services to Lee County on a regular basis for the preceding, consecutive five years?

Yes _____

No _____

If yes, please provide your contractual history with Lee County for the past five, consecutive years. Attach additional pages if necessary.

N/A

ADDENDUM #1/FORMAL QUOTATION NO.: Q-040024
LEE COUNTY PURCHASING - BIDDERS CHECK LIST

IMPORTANT: Please read carefully and return with your bid proposal.
Please check off each of the following items as the necessary action is completed:

1. The Quote has been signed.
2. The Quote prices offered have been reviewed.
3. The price extensions and totals have been checked.
4. The original (must be manually signed) and 2 copies of the quote have been submitted.
5. Three (3) identical sets of descriptive literature, brochures and/or data (if required) have been submitted under separate cover. *SAYS "Should Be Submitted in Duplicate" on pg 1 item C*
6. All modifications have been acknowledged in the space provided.
7. All addendums issued, if any, have been acknowledged in the space provided.
8. Erasures or other changes made to the quote document have been initialed by the person signing the quote.
9. Bid Bond and/or certified Check, (if required) have been submitted with the quote in amounts indicated. *N/A*
10. Any Delivery information required is included.
11. The mailing envelope has been addressed to:

MAILING ADDRESS	or	PHYSICAL ADDRESS
Lee County Purchasing		Lee County Purchasing
P.O. Box 398		1825 HENDRY STREET, 3 RD FLOOR
Ft. Myers, FL 33902-0398		Ft. Myers, FL 33901
12. The mailing envelope **MUST** be sealed and marked with:
Quote Number
Opening Date and/or Receiving Date
13. The quote will be mailed or delivered in time to be received no later than the specified opening date and time. (Otherwise quote cannot be considered or accepted.)
14. If submitting a "NO BID" please write quote number here _____ and check one of the following:
 Do not offer this product Insufficient time to respond.
 Unable to meet specifications (why)
 Unable to meet bond or insurance requirement.
Other: _____

Company Name and Address:



MATERIAL SAFETY DATA SHEET

PRODUCT

C-2

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : C-2
APPLICATION : CORROSION/SCALE INHIBITOR
COMPANY IDENTIFICATION : Ondeo Nalco Company
Ondeo Nalco Center
Naperville, Illinois
60563-1198
EMERGENCY TELEPHONE NUMBER(S) : (800) 424-9300 (24 Hours) CHEMTREC

NFPA 704M/HMIS RATING

HEALTH: 1/1 FLAMMABILITY: 0/0 INSTABILITY: 0/0 OTHER:
0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme

2. COMPOSITION/INFORMATION ON INGREDIENTS

Our hazard evaluation has identified the following chemical substance(s) as hazardous.

Hazardous Substance(s)	CAS NO	% (w/w)
Tetrapotassium Pyrophosphate	7320-34-5	60.0 - 100.0

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING

Irritating to eyes. May cause skin irritation.
Do not get in eyes, on skin, on clothing. Do not take internally. Wear suitable protective clothing. Keep container tightly closed. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water. Protect product from freezing.
May evolve oxides of phosphorus (POx) under fire conditions.

PRIMARY ROUTES OF EXPOSURE :

Eye, Skin

HUMAN HEALTH HAZARDS - ACUTE :

EYE CONTACT :

Slightly irritating, but will not injure eye tissue.

SKIN CONTACT :

May cause irritation with prolonged contact.

INGESTION :

Not a likely route of exposure. No adverse effects expected.



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INHALATION :

Not a likely route of exposure. No adverse effects expected.

SYMPTOMS OF EXPOSURE :

Acute :

A review of available data does not identify any symptoms from exposure not previously mentioned.

Chronic :

A review of available data does not identify any symptoms from exposure not previously mentioned.

AGGRAVATION OF EXISTING CONDITIONS :

A review of available data does not identify any worsening of existing conditions.

4. FIRST AID MEASURES

EYE CONTACT :

Immediately flush eye with water for at least 15 minutes while holding eyelids open. If irritation persists, repeat flushing. Get immediate medical attention.

SKIN CONTACT :

Flush affected area with water. If symptoms develop, seek medical advice.

INGESTION :

Do not induce vomiting without medical advice. If conscious, washout mouth and give water to drink. If symptoms develop, seek medical advice.

INHALATION :

Remove to fresh air, treat symptomatically. If symptoms develop, seek medical advice.

NOTE TO PHYSICIAN :

Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition.

5. FIRE FIGHTING MEASURES

FLASH POINT : None

EXTINGUISHING MEDIA :

Not expected to burn. Use extinguishing media appropriate for surrounding fire.

FIRE AND EXPLOSION HAZARD :

May evolve oxides of phosphorus (POx) under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING :

In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.



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6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS :

Restrict access to area as appropriate until clean-up operations are complete. Stop or reduce any leaks if it is safe to do so. Do not touch spilled material. Ventilate spill area if possible. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection).

METHODS FOR CLEANING UP :

SMALL SPILLS: Soak up spill with absorbent material. Place residues in a suitable, covered, properly labeled container. Wash affected area. **LARGE SPILLS:** Contain liquid using absorbent material, by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

ENVIRONMENTAL PRECAUTIONS :

Do not contaminate surface water.

7. HANDLING AND STORAGE

HANDLING :

Avoid eye and skin contact. Do not take internally. Ensure all containers are labelled. Keep the containers closed when not in use.

STORAGE CONDITIONS :

Store the containers tightly closed.

UNSUITABLE CONSTRUCTION MATERIAL :

Aluminum, Do not use aluminum or mild steel.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS :

This product does not contain any substance that has an established exposure limit.

ENGINEERING MEASURES :

General ventilation is recommended.

RESPIRATORY PROTECTION :

Respiratory protection is not normally needed. Respiratory protection is not normally needed. Respiratory protection is not normally needed.

HAND PROTECTION :

Neoprene gloves, Butyl gloves

SKIN PROTECTION :

Wear standard protective clothing.



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EYE PROTECTION :

Wear chemical splash goggles.

HYGIENE RECOMMENDATIONS :

Keep an eye wash fountain available. Keep a safety shower available. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Liquid
APPEARANCE	Colorless
ODOR	None
SPECIFIC GRAVITY	1.74 @ 59 °F / 15 °C
DENSITY	14.5 lb/gal
SOLUBILITY IN WATER	Complete
pH (100 %)	10.0 - 11.5
FREEZING POINT	-20 °F / -28.9 °C

Note: These physical properties are typical values for this product and are subject to change.

10. STABILITY AND REACTIVITY

STABILITY :

Stable under normal conditions.

HAZARDOUS POLYMERIZATION :

Hazardous polymerization will not occur.

CONDITIONS TO AVOID :

Extremes of temperature

MATERIALS TO AVOID :

None known

HAZARDOUS DECOMPOSITION PRODUCTS :

Under fire conditions: Oxides of phosphorus

11. TOXICOLOGICAL INFORMATION

The following results are for the product.

ACUTE ORAL TOXICITY :

Species	LD50	Test Descriptor
Rat	2,444 mg/kg	Product
Rating :	Non-Hazardous	



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EMERGENCY TELEPHONE NUMBER(S)

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ACUTE DERMAL TOXICITY :

Species LD50 Test Descriptor
 Rabbit > 5,000 mg/kg Product
 Rating : Non-Hazardous

PRIMARY SKIN IRRITATION :

Draize Score Test Descriptor
 0.8 / 8.0 Product
 Rating : Slightly irritating

PRIMARY EYE IRRITATION :

Draize Score Test Descriptor
 17.3 / 110.0 Product
 Rating : Mildly irritating

CARCINOGENICITY :

None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

HUMAN HAZARD CHARACTERIZATION :

Based on our hazard characterization, the potential human hazard is: Low

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL EFFECTS :

The following results are for the product.

ACUTE FISH RESULTS :

Species	Exposure	LC50	Test Descriptor
Bluegill Sunfish	96 hrs	420 mg/l	Product
Rainbow Trout	96 hrs	450 mg/l	Product

Rating : Essentially non-toxic

ACUTE INVERTEBRATE RESULTS :

Species	Exposure	LC50	EC50	Test Descriptor
Daphnia magna	48 hrs	> 100 mg/l		Product

Rating : Essentially non-toxic

PERSISTENCY AND DEGRADATION :

Chemical Oxygen Demand (COD) : < 100 mg/l

Biological Oxygen Demand (BOD) :

Incubation Period	Value	Test Descriptor
	0 mg/l	



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ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION

Based on our hazard characterization, the potential environmental hazard is: Low

If released into the environment, see CERCLA/SUPERFUND in Section 15.

13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it could meet the criteria of a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Before disposal, it should be determined if the waste meets the criteria of a hazardous waste.

Hazardous Waste: D002

Hazardous wastes must be transported by a licensed hazardous waste transporter and disposed of or treated in a properly licensed hazardous waste treatment, storage, disposal or recycling facility. Consult local, state, and federal regulations for specific requirements.

14. TRANSPORT INFORMATION

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are as follows.

LAND TRANSPORT :

Proper Shipping Name :	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
Technical Name(s) :	TETRAPOTASSIUM PYROPHOSPHATE
UN/ID No :	UN 3266
Hazard Class - Primary :	8
Packing Group :	III
Flash Point :	None

AIR TRANSPORT (ICAO/IATA) :

Proper Shipping Name :	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
Technical Name(s) :	TETRAPOTASSIUM PYROPHOSPHATE
UN/ID No :	UN 3266
Hazard Class - Primary :	8
Packing Group :	III
IATA Cargo Packing Instructions :	820
IATA Cargo Aircraft Limit :	60 L (Max net quantity per package)

MARINE TRANSPORT (IMDG/IMO) :

Proper Shipping Name :	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
Technical Name(s) :	TETRAPOTASSIUM PYROPHOSPHATE



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PRODUCT

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EMERGENCY TELEPHONE NUMBER(S)
(800) 424-9300 (24 Hours) CHEMTREC

UN/ID No : UN 3266
Hazard Class - Primary : 8
Packing Group : III

15. REGULATORY INFORMATION

NATIONAL REGULATIONS, USA :

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200 :
Based on our hazard evaluation, none of the substances in this product are hazardous.

CERCLA/SUPERFUND, 40 CFR 117, 302 :
Notification of spills of this product is not required.

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312, AND 313 :

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355) :
This product does not contain substances listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 AND 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370) :
Our hazard evaluation has found this product to be hazardous. The product should be reported under the following indicated EPA hazard categories:

X	Immediate (Acute) Health Hazard
-	Delayed (Chronic) Health Hazard
-	Fire Hazard
-	Sudden Release of Pressure Hazard
-	Reactive Hazard

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372) :
This product does not contain substances on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA) :
The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

FOOD AND DRUG ADMINISTRATION (FDA) Federal Food, Drug and Cosmetic Act :
When use situations necessitate compliance with FDA regulations, this product is acceptable under : 21 CFR 176.170 Components of paper and paperboard in contact with aqueous and fatty foods and 21 CFR 176.180 Components of paper and paperboard in contact with dry foods.

NSF INTERNATIONAL :
This product has received NSF/International certification under ANSI/NSF Standard 60 in the corrosion and scale control and sequestering categories. The official name is "Tetrapotassium Pyrophosphate." Maximum product



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application dosage is : 27 mg/l. Only product manufactured at Plant 111 USA and whose container label bears the ANSI/NSF Mark may be used in potable water treatment applications.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 / formerly Sec. 307, 40 CFR 116.4 / formerly Sec. 311 :

None of the substances are specifically listed in the regulation.

CLEAN AIR ACT, Sec. 111 (40 CFR 60, Volatile Organic Compounds), Sec. 112 (40 CFR 61, Hazardous Air Pollutants), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances) :

None of the substances are specifically listed in the regulation.

CALIFORNIA PROPOSITION 65 :

This product does not contain substances which require warning under California Proposition 65.

MICHIGAN CRITICAL MATERIALS :

None of the substances are specifically listed in the regulation.

STATE RIGHT TO KNOW LAWS :

None of the substances are specifically listed in the regulation.

NATIONAL REGULATIONS, CANADA :

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) :

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS CLASSIFICATION :

E - Corrosive Material

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) :

The substances in this preparation are listed on the Domestic Substances List (DSL), are exempt, or have been reported in accordance with the New Substances Notification Regulations.

16. OTHER INFORMATION

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH., (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.



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Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA), (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH, (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Ariel Insight# (An integrated guide to industrial chemicals covered under major regulatory and advisory programs), North American Module, Western European Module, Chemical Inventories Module and the Generics Module (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Prepared By : Product Safety Department
Date issued : 04/04/2003
Replaces : 12/13/2001



MATERIAL SAFETY DATA SHEET

PRODUCT

C-9®

EMERGENCY TELEPHONE NUMBER

(800) 424-9300 (24 Hours) CHEMTREC

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : C-9®
APPLICATION : CORROSION INHIBITOR
COMPANY IDENTIFICATION : ONDEO Nalco Company
ONDEO Nalco Center
Naperville, Illinois
60563-1198
EMERGENCY TELEPHONE NUMBER : (800) 424-9300 (24 Hours) CHEMTREC
NFPA 704M/HMIS RATING
HEALTH : 3 / 3 FLAMMABILITY : 0 / 0 REACTIVITY : 0 / 0 OTHER :
0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme

2. COMPOSITION/INFORMATION ON INGREDIENTS

Our hazard evaluation has identified the following chemical substance(s) as hazardous. Consult Section 15 for the nature of the hazard(s).

Hazardous Substance(s)	CAS NO	% (w/w)
Phosphoric Acid	7664-38-2	30.0 - 60.0
Zinc Chloride	7646-85-7	30.0 - 60.0

3. HAZARDS IDENTIFICATION

****EMERGENCY OVERVIEW****
DANGER
Corrosive. May cause tissue damage. Toxic to aquatic organisms.
Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. Keep container tightly closed and in a well-ventilated place. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water.
Wear a face shield. Wear chemical resistant apron, chemical splash goggles, impervious gloves and boots.
Not flammable or combustible. May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of phosphorus (POx) under fire conditions. May evolve HCl under fire conditions. May evolve zinc fumes under fire conditions.

PRIMARY ROUTES OF EXPOSURE :
Eye, Skin
HUMAN HEALTH HAZARDS - ACUTE :
EYE CONTACT :
Corrosive. Will cause eye burns and permanent tissue damage.



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SKIN CONTACT :

May cause severe irritation or tissue damage depending on the length of exposure and the type of first aid administered.

INGESTION :

Not a likely route of exposure. Corrosive; causes chemical burns to the mouth, throat and stomach.

INHALATION :

Not a likely route of exposure. Irritating, in high concentrations, to the eyes, nose, throat and lungs.

SYMPTOMS OF EXPOSURE :

Acute :

A review of available data does not identify any symptoms from exposure not previously mentioned.

Chronic :

A review of available data does not identify any symptoms from exposure not previously mentioned.

AGGRAVATION OF EXISTING CONDITIONS :

A review of available data does not identify any worsening of existing conditions.

4. FIRST AID MEASURES

EYE CONTACT :

PROMPT ACTION IS ESSENTIAL IN CASE OF CONTACT. Immediately flush eye with water for at least 15 minutes while holding eyelids open. Get immediate medical attention.

SKIN CONTACT :

Immediately flush with plenty of water for at least 15 minutes. For a large splash, flood body under a shower. Remove contaminated clothing. Wash off affected area immediately with plenty of water. Get immediate medical attention. Contaminated clothing, shoes, and leather goods must be discarded or cleaned before re-use.

INGESTION :

DO NOT INDUCE VOMITING. If conscious, washout mouth and give water to drink. Get immediate medical attention.

INHALATION :

Remove to fresh air, treat symptomatically. Get medical attention.

NOTE TO PHYSICIAN :

Probable mucosal damage may contraindicate the use of gastric lavage. Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition.

5. FIRE FIGHTING MEASURES

FLASH POINT : > 200 °F / > 93 °C ()

EXTINGUISHING MEDIA :

Not expected to burn. Use extinguishing media appropriate for surrounding fire.



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FIRE AND EXPLOSION HAZARD :

Not flammable or combustible. May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of phosphorus (POx) under fire conditions. May evolve HCl under fire conditions. May evolve zinc fumes under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING :

In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS :

Restrict access to area as appropriate until clean-up operations are complete. Ensure clean-up is conducted by trained personnel only. Ventilate spill area if possible. Do not touch spilled material. Stop or reduce any leaks if it is safe to do so. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Notify appropriate government, occupational health and safety and environmental authorities.

METHODS FOR CLEANING UP :

SMALL SPILLS: Soak up spill with absorbent material. Place residues in a suitable, covered, properly labeled container. Wash affected area. **LARGE SPILLS:** Contain liquid using absorbent material, by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Wash site of spillage thoroughly with water. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

ENVIRONMENTAL PRECAUTIONS :

This product is toxic to fish and other water organisms. Do not discharge directly into lakes, ponds, streams, waterways or public water supplies.

7. HANDLING AND STORAGE

HANDLING :

Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. Avoid generating aerosols and mists. Keep the containers closed when not in use. Have emergency equipment (for fires, spills, leaks, etc.) readily available.

STORAGE CONDITIONS :

Store the containers tightly closed. Store separately from oxidizers. Store in suitable labelled containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS :

Exposure guidelines have not been established for this product. Available exposure limits for the substance(s) are shown below.

ACGIH/TLV :

Substance(s)

Phosphoric Acid

TWA: 1 mg/m³

STEL: 3 mg/m³



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Zinc Chloride Fume TWA: 1 mg/m³
 STEL: 2 mg/m³

OSHA/PEL :
Substance(s)

Phosphoric Acid TWA: 1 mg/m³
 STEL: 3 mg/m³

Zinc Chloride Fume TWA: 1 mg/m³
 STEL: 2 mg/m³

ENGINEERING MEASURES :

General ventilation is recommended. Use local exhaust ventilation if necessary to control airborne mist and vapor.

RESPIRATORY PROTECTION :

If significant mists, vapors or aerosols are generated an approved respirator is recommended. A dust, mist, fume cartridge may be used. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection. FULL-FACE MASK WITH WHITE CARTRIDGE

HAND PROTECTION :

NEOPRENE, NITRILE, OR NATURAL RUBBER GLOVES

SKIN PROTECTION :

Wear chemical resistant apron, chemical splash goggles, impervious gloves and boots. A full slicker suit is recommended if gross exposure is possible.

EYE PROTECTION :

Wear a face shield with chemical splash goggles.

HYGIENE RECOMMENDATIONS :

Eye wash station and safety shower are necessary. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE Liquid

APPEARANCE Clear Colorless

ODOR None

SPECIFIC GRAVITY 1.56 - 1.6 @ 77 °F / 25 °C

DENSITY 13.3 lb/gal

SOLUBILITY IN WATER Complete



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pH (100 %) < 1.0
FREEZING POINT -4 °F / -20 °C
BOILING POINT > 212 °F / > 100 °C
VOC CONTENT 0.00 %

10. STABILITY AND REACTIVITY

STABILITY :

Stable under normal conditions.

HAZARDOUS POLYMERIZATION :

Hazardous polymerization will not occur.

CONDITIONS TO AVOID :

Freezing temperatures.

MATERIALS TO AVOID :

Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors. Contact with strong alkalis (e.g. ammonia and its solutions, carbonates, sodium hydroxide (caustic), potassium hydroxide, calcium hydroxide (lime), cyanide, sulfide, hypochlorites, chlorites) may generate heat, splattering or boiling and toxic vapors. Metals

HAZARDOUS DECOMPOSITION PRODUCTS :

Under fire conditions: Oxides of phosphorus, Oxides of carbon, HCl, Zinc Oxide

11. TOXICOLOGICAL INFORMATION

The following results are for the hazardous components.

ACUTE ORAL TOXICITY :

Species	LD50	Tested Substance
Rat	1,530 mg/kg	Phosphoric Acid
Rat	350 mg/kg	Zinc Chloride

Rating : Non-Hazardous

CARCINOGENICITY :

None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

HUMAN HAZARD CHARACTERIZATION :

Based on our hazard characterization, the potential human hazard is: High

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL EFFECTS :

The following results are for the product.



MATERIAL SAFETY DATA SHEET

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EMERGENCY TELEPHONE NUMBER

(800) 424-9300 (24 Hours) CHEMTREC

ACUTE FISH RESULTS :

Species	Exposure	LC50	Tested Substance
Inland Silverside	96 hrs	> 5,000 mg/l	Product

Rating : Essentially non-toxic

ACUTE INVERTEBRATE RESULTS :

Species	Exposure	LC50	EC50	Tested Substance
M. bahia (Mysid shrimp)	96 hrs	4.8 mg/l		Product

Rating : Toxic

ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION

Based on our hazard characterization, the potential environmental hazard is: Moderate

If released into the environment, see CERCLA/SUPERFUND in Section 15.

13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it could meet the criteria of a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Before disposal, it should be determined if the waste meets the criteria of a hazardous waste.

Hazardous Waste: D002

Hazardous wastes must be transported by a licensed hazardous waste transporter and disposed of or treated in a properly licensed hazardous waste treatment, storage, disposal or recycling facility. Consult local, state, and federal regulations for specific requirements.

14. TRANSPORT INFORMATION

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are:

LAND TRANSPORT :

Proper Shipping Name :	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Technical Name(s) :	ZINC CHLORIDE, PHOSPHORIC ACID
UN/ID No :	UN 3264
Hazard Class - Primary :	8
Packing Group :	III
Flash Point :	> 93 °C / > 200 °F
DOT Reportable Quantity (per package) :	3,800 lbs
DOT RQ Component :	ZINC CHLORIDE



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AIR TRANSPORT (ICAO/IATA) :

Proper Shipping Name :	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Technical Name(s) :	ZINC CHLORIDE, PHOSPHORIC ACID
UN/ID No :	UN 3264
Hazard Class - Primary :	8
Packing Group :	III
IATA Cargo Packing Instructions :	820
IATA Cargo Aircraft Limit :	60 L (Max net quantity per package)

MARINE TRANSPORT (IMDG/IMO) :

Proper Shipping Name :	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Technical Name(s) :	ZINC CHLORIDE, PHOSPHORIC ACID
UN/ID No :	UN 3264
Hazard Class - Primary :	8
Packing Group :	III

15. REGULATORY INFORMATION

NATIONAL REGULATIONS, USA :

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200 :

Based on our hazard evaluation, the following substance(s) in this product is/are hazardous and the reason(s) is/are shown below.

Phosphoric Acid : Corrosive
Zinc Chloride : Corrosive

CERCLA/SUPERFUND, 40 CFR 117, 302 :

This product contains the following Reportable Quantity (RQ) Substance. Also listed is the RQ for the product.

<u>RQ Substance</u>	<u>RQ</u>
Zinc Chloride	3,800 lbs

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312, AND 313 :

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355) :

This product does not contain substances listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 AND 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370) :

Our hazard evaluation has found this product to be hazardous. The product should be reported under the following EPA hazard categories:

X	Immediate (Acute) Health Hazard
-	Delayed (Chronic) Health Hazard
-	Fire Hazard



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- Sudden Release of Pressure Hazard
- Reactive Hazard

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372) :

This product contains the following substance(s), (with CAS # and % range) which appear(s) on the List of Toxic Chemicals

<u>Hazardous Substance(s)</u>	<u>CAS NO</u>	<u>% (w/w)</u>
Zinc Chloride	7646-85-7	30.0 - 60.0

TOXIC SUBSTANCES CONTROL ACT (TSCA) :

The chemical substances in this product are on the TSCA 8(b) Inventory (40 CFR 710).

NSF INTERNATIONAL :

This product has received NSF/International certification under ANSI/NSF Standard 60 in the corrosion and scale control and sequestering categories. The official name is "Zinc Orthophosphate." Maximum product application dosage is : 15.6 mg/l. Only product manufactured at Plant 140 USA and whose container label bears the ANSI/NSF Mark may be used in potable water treatment applications.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 / formerly Sec. 307, 40 CFR / formerly Sec. 311 :

This product contains the following substances listed in the regulation:

<u>Substance(s)</u>	<u>Citations</u>
Phosphoric Acid :	Sec. 311
Zinc Chloride :	Sec. 307, Sec. 311

CLEAN AIR ACT, Sec. 111 (40 CFR 60, Volatile Organic Compounds), Sec. 112 (40 CFR 61, Hazardous Air Pollutants), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances) :

None of the substances are specifically listed in the regulation.

CALIFORNIA PROPOSITION 65 :

This product does not contain substances which require warning under California Proposition 65.

MICHIGAN CRITICAL MATERIALS :

This product contains the following substances listed in the regulation:

Zinc Chloride

STATE RIGHT TO KNOW LAWS :

The following substances are disclosed for compliance with State Right to Know Laws:

Zinc Chloride	7646-85-7
Phosphoric Acid	7664-38-2



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NATIONAL REGULATIONS, CANADA :

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) :

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS CLASSIFICATION :

E - Corrosive Material

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) :

All substances in this product are listed on the Domestic Substances List (DSL), are exempt, or have been reported in accordance with the New Substances Notification Regulations.

16. OTHER INFORMATION

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH., (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, Co.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA), (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda MD.

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH, (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Ariel Insight# (An integrated guide to industrial chemicals covered under major regulatory and advisory programs), North American Module, Western European Module, Chemical Inventories Module and the Generics Module (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.



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EMERGENCY TELEPHONE NUMBER

(800) 424-9300 (24 Hours) CHEMTREC

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS# CD-ROM Version),
Micromedex, Inc., Englewood, CO

Prepared By : Product Safety Department

Date issued : 08/23/2001

Replaces : 01/24/2000



Product Bulletin M-C-9

C-9[®]

Corrosion Inhibitor

PRODUCT BENEFITS

- Effective corrosion control throughout the entire system, thus extending equipment life
- Maintains system capacity at lower pumping costs
- Reduces problems such as staining of finished products, caused by the presence of ferrous corrosion products
- Easy to feed liquid eliminates the need for solution preparation and mix equipment
- Rapid film formation

GENERAL DESCRIPTION

C-9 Corrosion Inhibitor is a specially formulated zinc orthophosphate used to control corrosion in municipal distribution and mill water systems. When added to the supply water, C-9 forms a stable, evenly distributed protective film on distribution piping and other metal surfaces. C-9 is an effective treatment for controlling lead corrosion and soluble lead in municipal drinking water systems. For a general description of the typical chemical and physical properties, refer to the C-9 Material Safety Data Sheet.

MATERIALS COMPATIBILITY

C-9 is corrosive to iron and its alloys. Compatible materials of construction for storage tanks, chemical feed systems, and piping include high density (HSPE) or cross-linked (XLPE) polyethylene or fiberglass. Compatible materials for pump "liquid ends" and piping include polyethylene, polypropylene, PVC, Viton, Hypalon, or Teflon.

FEEDING

C-9 Corrosion Inhibitor should be fed neat.

REGULATORY STATUS

NSF: C-9 conforms with NSF Standard 60 – drinking water treatment chemicals at concentrations not exceeding 15.6 mg/L.

STORAGE

Store C-9 in heated buildings or heat-traced tanks to prevent freezing. Although this product is freeze-thaw stable, stratification may occur upon freezing.

SHIPPING

C-9 is shipped in plastic drums, disposable liquid bins, and bulk.

Freight Classification: Compounds, iron or steel rust preventing or removing compounds, O/T petroleum, NOI.

REMARKS

If you need assistance or information, please call your nearest Ondeo Nalco representative, or Customer Care at 800-777-4030. For more news about Ondeo Nalco, visit our website at www.ondeo-nalco.com.

For **Medical and Transportation Emergencies** involving Ondeo Nalco products call (24-hour response): 1-800-424-9300.

Ondeo Nalco Company Ondeo Nalco Center • Naperville, Illinois 60563-1198

SUBSIDIARIES AND AFFILIATES IN PRINCIPAL LOCATIONS AROUND THE WORLD

C-9 is a Registered Trademark of Calgon Corporation

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The logo for SVEZ, consisting of the word "SVEZ" in a stylized, bold, sans-serif font.



MATERIAL SAFETY DATA SHEET

PRODUCT

CAT-FLOC® 71259

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : CAT-FLOC® 71259

APPLICATION : COAGULANT

COMPANY IDENTIFICATION :
Ondeo Nalco Company
Ondeo Nalco Center
Naperville, Illinois
60563-1198

EMERGENCY TELEPHONE NUMBER(S) : (800) 424-9300 (24 Hours) CHEMTREC

NFPA 704M/HMIS RATING

HEALTH : 0 / 1 FLAMMABILITY : 1 / 1 INSTABILITY : 0 / 0 OTHER :
0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme

2. COMPOSITION/INFORMATION ON INGREDIENTS

Based on our hazard evaluation, none of the substances in this product are hazardous.

3. HAZARDS IDENTIFICATION

****EMERGENCY OVERVIEW****

CAUTION

AVOID CONTACT WITH SKIN, EYES OR CLOTHING. In case of contact immediately flush eyes or skin with plenty of water. Get medical attention if irritation persists.
Do not get in eyes, on skin, on clothing. Do not take internally. Wear suitable protective clothing. Keep container tightly closed. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of soap and water. Protect product from freezing.
May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions. May evolve HCl under fire conditions. May evolve ammonia (NH4) under fire conditions.

PRIMARY ROUTES OF EXPOSURE :
Eye, Skin

HUMAN HEALTH HAZARDS - ACUTE :

EYE CONTACT :
May cause irritation with prolonged contact.

SKIN CONTACT :
May cause irritation with prolonged contact.

INGESTION :
Not a likely route of exposure. No adverse effects expected.



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INHALATION :

Not a likely route of exposure. No adverse effects expected.

SYMPTOMS OF EXPOSURE :

Acute :

A review of available data does not identify any symptoms from exposure not previously mentioned.

Chronic :

A review of available data does not identify any symptoms from exposure not previously mentioned.

AGGRAVATION OF EXISTING CONDITIONS :

A review of available data does not identify any worsening of existing conditions.

4. FIRST AID MEASURES

EYE CONTACT :

Flush affected area with water. If symptoms develop, seek medical advice.

SKIN CONTACT :

Remove contaminated clothing. Wash off affected area immediately with plenty of water. If symptoms develop, seek medical advice.

INGESTION :

Do not induce vomiting without medical advice. If conscious, washout mouth and give water to drink. If symptoms develop, seek medical advice.

INHALATION :

Remove to fresh air, treat symptomatically. If symptoms develop, seek medical advice.

If Swallowed: Do not induce vomiting. Drink large quantities of water. Never give anything by mouth to an unconscious or convulsing person.

If in Eyes: Flood eyes with water for at least 15 minutes.

If on Skin: Wash thoroughly soap and water.

NOTE TO PHYSICIAN :

Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition.

5. FIRE FIGHTING MEASURES

FLASH POINT : > 200 °F / > 93 °C

EXTINGUISHING MEDIA :

This product would not be expected to burn unless all the water is boiled away. The remaining organics may be ignitable. Use extinguishing media appropriate for surrounding fire. Water mist may be used to cool closed containers.



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FIRE AND EXPLOSION HAZARD :

May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions. May evolve HCl under fire conditions. May evolve ammonia (NH4) under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING :

In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS :

Notify appropriate government, occupational health and safety and environmental authorities. Do not touch spilled material. Stop or reduce any leaks if it is safe to do so. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection).

METHODS FOR CLEANING UP :

SMALL SPILLS: Soak up spill with absorbent material. Place residues in a suitable, covered, properly labeled container. Wash affected area. **LARGE SPILLS:** Contain liquid using absorbent material, by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

ENVIRONMENTAL PRECAUTIONS :

This product is toxic to fish. It should not be directly discharged into lakes, ponds, streams, waterways or public water supplies.

7. HANDLING AND STORAGE

HANDLING :

Do not take internally. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Ensure all containers are labelled. Avoid eye and skin contact.

STORAGE CONDITIONS :

Store separately from oxidizers. Store the containers tightly closed. Protect product from freezing.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS :

This product does not contain any substance that has an established exposure limit.

ENGINEERING MEASURES :

General ventilation is recommended.

RESPIRATORY PROTECTION :

Respiratory protection is not normally needed.

HAND PROTECTION :

Nitrile gloves, PVC gloves

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SKIN PROTECTION :

Wear standard protective clothing.

EYE PROTECTION :

Wear chemical splash goggles.

HYGIENE RECOMMENDATIONS :

Keep an eye wash fountain available. Keep a safety shower available.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Liquid
APPEARANCE	Colorless
ODOR	None
SPECIFIC GRAVITY	1.072 - 1.112
DENSITY	8.9 - 9.3 lb/gal
SOLUBILITY IN WATER	Complete
pH (100 %)	5.0 - 8.0
VISCOSITY	< 275 cps @ 77 °F / 25 °C
BOILING POINT	> 212 °F / > 100 °C
VAPOR DENSITY	Same as water
VOC CONTENT	0.00 %

Note: These physical properties are typical values for this product and are subject to change.

10. STABILITY AND REACTIVITY**STABILITY :**

Stable under normal conditions.

HAZARDOUS POLYMERIZATION :

Hazardous polymerization will not occur.

CONDITIONS TO AVOID :

Freezing temperatures.

MATERIALS TO AVOID :

Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors.

HAZARDOUS DECOMPOSITION PRODUCTS :

Under fire conditions: Oxides of carbon, Oxides of nitrogen, HCl, ammonia



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11. TOXICOLOGICAL INFORMATION

CARCINOGENICITY :

None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL EFFECTS :

The following results are for the product.

ACUTE FISH RESULTS :

Species	Exposure	LC50	Test Descriptor
Bluegill Sunfish	96 hrs	0.82 - 1.3 mg/l	Product
Rainbow Trout	96 hrs	0.37 mg/l	Product

Rating : Very toxic

ACUTE INVERTEBRATE RESULTS :

Species	Exposure	LC50	EC50	Test Descriptor
Daphnia magna	48 hrs	0.9 mg/l		Product

Rating : Very toxic

If released into the environment, see CERCLA/SUPERFUND in Section 15.

13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

As a non-hazardous waste, it is not subject to federal regulation. Consult state or local regulation for any additional handling, treatment or disposal requirements. For disposal, contact a properly licensed waste treatment, storage, disposal or recycling facility.

14. TRANSPORT INFORMATION

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are as follows.

LAND TRANSPORT :

Proper Shipping Name :

**PRODUCT IS NOT REGULATED DURING
TRANSPORTATION**



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AIR TRANSPORT (ICAO/IATA) :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

MARINE TRANSPORT (IMDG/IMO) :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

15. REGULATORY INFORMATION

NATIONAL REGULATIONS, USA :

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200 :
Based on our hazard evaluation, none of the substances in this product are hazardous.

CERCLA/SUPERFUND, 40 CFR 117, 302 :
Notification of spills of this product is not required.

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312, AND 313 :

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355) :
This product does not contain substances listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 AND 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370) :
Our hazard evaluation has found that this product is not hazardous under 29 CFR 1910.1200.

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372) :
This product does not contain substances on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA) :
The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

NSF INTERNATIONAL :
This product has received NSF/International certification under ANSI/NSF Standard 60 in the coagulation and flocculation category. The official name is "Poly (Diallyldimethylammonium Chloride) (pDADMAC)." Maximum product application dosage is : 23 mg/l. Only product manufactured at Plant 9 USA and whose container label bears the ANSI/NSF Mark may be used in potable water treatment applications.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 / formerly Sec. 307, 40 CFR / formerly Sec. 311 :
None of the substances are specifically listed in the regulation.



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CLEAN AIR ACT, Sec. 111 (40 CFR 60, Volatile Organic Compounds), Sec. 112 (40 CFR 61, Hazardous Air Pollutants), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances) :
None of the substances are specifically listed in the regulation.

CALIFORNIA PROPOSITION 65 :

This product does not contain substances which require warning under California Proposition 65.

MICHIGAN CRITICAL MATERIALS :

None of the substances are specifically listed in the regulation.

STATE RIGHT TO KNOW LAWS :

The following substances are disclosed for compliance with State Right to Know Laws:

Poly(DADMAC)	26062-79-3
Water	7732-18-5

NATIONAL REGULATIONS, CANADA :

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) :

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS CLASSIFICATION :

Not considered a WHMIS controlled product.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) :

The substances in this preparation are listed on the Domestic Substances List (DSL), are exempt, or have been reported in accordance with the New Substances Notification Regulations.

16. OTHER INFORMATION

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH., (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.



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EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA), (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH, (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Ariel Insight# (An integrated guide to industrial chemicals covered under major regulatory and advisory programs), North American Module, Western European Module, Chemical Inventories Module and the Generics Module (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Prepared By : Product Safety Department
Date issued : 01/18/2000
Replaces : 11/22/1999



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCLEAR® 8173 PULV

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : NALCLEAR® 8173 PULV

APPLICATION : FLOCCULANT

COMPANY IDENTIFICATION :
Ondeo Nalco Company
Ondeo Nalco Center
Naperville,
60563-1198

EMERGENCY TELEPHONE NUMBER(S) : (800) 424-9300 (24 Hours) CHEMTREC

NFPA 704M/HMIS RATING

HEALTH: 0/1 FLAMMABILITY: 1/1 REACTIVITY: 0/0 OTHER:
0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme

2. COMPOSITION/INFORMATION ON INGREDIENTS

Based on our hazard evaluation, none of the substances in this product are hazardous.

3. HAZARDS IDENTIFICATION

****EMERGENCY OVERVIEW****

CAUTION

May cause irritation with prolonged contact.
Do not get in eyes, on skin, on clothing. Do not take internally. Do not breathe dust. Wear suitable protective clothing. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of soap and water.
May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions. May evolve oxides of sulfur (SOx) under fire conditions.

PRIMARY ROUTES OF EXPOSURE :
Eye, Skin, Inhalation

HUMAN HEALTH HAZARDS - ACUTE :

EYE CONTACT :
May cause irritation with prolonged contact.

SKIN CONTACT :
May cause irritation with prolonged contact.

INGESTION :
Not a likely route of exposure. May be harmful if swallowed.



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INHALATION :

If dust is generated, can cause mucous membrane irritation. A single brief inhalation exposure (minutes) is not likely to cause serious effects.

SYMPTOMS OF EXPOSURE :

Acute :

A review of available data does not identify any symptoms from exposure not previously mentioned.

Chronic :

A review of available data does not identify any symptoms from exposure not previously mentioned.

AGGRAVATION OF EXISTING CONDITIONS :

A review of available data does not identify any worsening of existing conditions.

HUMAN HEALTH HAZARDS - CHRONIC :

No adverse effects expected other than those mentioned above.

4. FIRST AID MEASURES

EYE CONTACT :

Immediately flush eye with water for at least 15 minutes while holding eyelids open. Get immediate medical attention.

SKIN CONTACT :

Immediately wash with plenty of soap and water. Remove contaminated clothing. Wash off affected area immediately with soap and plenty of water. If skin irritation persists, obtain medical attention.

INGESTION :

Do not induce vomiting without medical advice. If conscious, washout mouth and give water to drink. Get medical attention.

INHALATION :

Remove to fresh air, treat symptomatically. Get medical attention.

NOTE TO PHYSICIAN :

Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition.

5. FIRE FIGHTING MEASURES

FLASH POINT : None

LOWER EXPLOSION LIMIT : Not flammable

UPPER EXPLOSION LIMIT : Not flammable

EXTINGUISHING MEDIA :

Use extinguishing media appropriate for surrounding fire.



MATERIAL SAFETY DATA SHEET

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NALCLEAR® 8173 PULV

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

UNSUITABLE EXTINGUISHING MEDIA :

Do not use water unless flooding amounts are available.

FIRE AND EXPLOSION HAZARD :

May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions. May evolve oxides of sulfur (SOx) under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING :

In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS :

Ensure adequate ventilation. Eliminate ignition sources.

METHODS FOR CLEANING UP :

Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations). Clean up promptly by scoop or vacuum.

7. HANDLING AND STORAGE

HANDLING :

Do not take internally. Avoid generating dusts. Wash thoroughly with soap and water or shower after handling.

STORAGE CONDITIONS :

Store in a cool well ventilated area away from direct sunlight. Store separately from oxidizers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS :

Exposure guidelines have not been established for this product. Available exposure limits for the substance(s) are shown below.

ACGIH/TLV :

Substance(s)

Respirable Nuisance TWA: 3 mg/m3

Particulates

OSHA/PEL :

Substance(s)

Respirable Nuisance TWA: 5 mg/m3

Particulates

ENGINEERING MEASURES :

General ventilation is recommended. Local exhaust ventilation may be necessary when dusts or mists are generated.



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCLEAR® 8173 PULV

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

RESPIRATORY PROTECTION :

Respiratory protection is not normally needed. If dusts are generated, use an approved air-purifying respirator. A dust respirator may be used.

HAND PROTECTION :

Impervious gloves, PVC gloves

SKIN PROTECTION :

Wear impervious apron and boots.

EYE PROTECTION :

Wear chemical splash goggles.

HYGIENE RECOMMENDATIONS :

Keep an eye wash fountain available. Wash hands during breaks and at end of the shift.

HUMAN EXPOSURE CHARACTERIZATION :

Based on our recommended product application and personal protective equipment, the potential human exposure is: Moderate

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Powder
APPEARANCE	White
ODOR	Slight
BULK DENSITY	44 lb/ft3
SOLUBILITY IN WATER	Complete

10. STABILITY AND REACTIVITY

STABILITY :

Stable under normal conditions.

HAZARDOUS POLYMERIZATION :

Hazardous polymerization will not occur.

CONDITIONS TO AVOID :

Moisture

MATERIALS TO AVOID :

Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors.

**MATERIAL SAFETY DATA SHEET**

PRODUCT

NALCLEAR® 8173 PULV

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

HAZARDOUS DECOMPOSITION PRODUCTS :

Under fire conditions: Oxides of carbon, Oxides of nitrogen, Oxides of sulfur

11. TOXICOLOGICAL INFORMATION

The following results are for the product.

ACUTE ORAL TOXICITY :

Species	LD50	Test Descriptor
Rat	> 5,000 mg/kg	Product
Rating :	Non-Hazardous	

SENSITIZATION :

This product is not expected to be a sensitizer.

CARCINOGENICITY :

None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

HUMAN HAZARD CHARACTERIZATION :

Based on our hazard characterization, the potential human hazard is: Low

12. ECOLOGICAL INFORMATION**ECOTOXICOLOGICAL EFFECTS :**

The following results are for the product.

ACUTE FISH RESULTS :

Species	Exposure	LC50	Test Descriptor
Rainbow Trout	96 hrs	> 100 mg/l	Product
Bluegill Sunfish	96 hrs	> 100 mg/l	Product
Fathead Minnow	96 hrs	> 1,000 mg/l	Product

Rating : Essentially non-toxic

AQUATIC PLANT RESULTS :

Species	Exposure	EC50	Test Descriptor
Green Algae (Selastrum capricornutum)	96 hrs	> 1,000 mg/l	Product

Rating : Essentially non-toxic

PERSISTENCY AND DEGRADATION :

Chemical Oxygen Demand (COD) : 523,000 mg/l

MOBILITY AND BIOACCUMULATION POTENTIAL

The product will not bioaccumulate.



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCLEAR® 8173 PULV

EMERGENCY TELEPHONE NUMBER(S)

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ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION

Based on our hazard characterization, the potential environmental hazard is: Low

Based on our recommended product application and the product's characteristics, the potential environmental exposure is: Low

If released into the environment, see CERCLA/SUPERFUND in Section 15.

13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

Dispose of wastes in an approved incinerator or waste treatment/disposal site, in accordance with all applicable regulations. Do not dispose of wastes in local sewer or with normal garbage.

14. TRANSPORT INFORMATION

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are:

LAND TRANSPORT :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

AIR TRANSPORT (ICAO/IATA) :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

MARINE TRANSPORT (IMDG/IMO) :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

15. REGULATORY INFORMATION

NATIONAL REGULATIONS, USA :

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200 :

Based on our hazard evaluation, none of the substances in this product are hazardous.

CERCLA/SUPERFUND, 40 CFR 117, 302 :

Notification of spills of this product is not required.



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCLEAR® 8173 PULV

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SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312, AND 313 :

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355) :

This product does not contain substances listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 AND 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370) :

Our hazard evaluation has found that this product is not hazardous under 29 CFR 1910.1200.

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372) :

This product does not contain substances on the List of Toxic Chemicals., This product contains the following substance(s), (with CAS # and % range) which appear(s) on the List of Toxic Chemicals

TOXIC SUBSTANCES CONTROL ACT (TSCA) :

The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

FOOD AND DRUG ADMINISTRATION (FDA) Federal Food, Drug and Cosmetic Act :

When use situations necessitate compliance with FDA regulations, this product is acceptable under : 21 CFR 173.5(a)(1) Acrylate-Acrylamide Resins used as flocculants in the clarification of beet sugar juice and liquor or cane sugar juice and liquor or corn starch hydrolyzate in an amount not to exceed 5 ppm by weight of the juice or 10 ppm by weight of the liquor or the corn starch hydrolyzate., 21 CFR 176.170/180 via 176.110 Limitation: not to exceed 2 weight % of finished paper or paperboard (polymer basis).

This product has been certified as KOSHER/PAREVE for year-round use INCLUDING THE PASSOVER SEASON by the CHICAGO RABBINICAL COUNCIL.

NSF INTERNATIONAL :

This product has received NSF/International certification under ANSI/NSF Standard 60 in the coagulation and flocculation category. The official name is "Polyacrylamide." Maximum product application dosage is : 1 mg/l. Only product manufactured at Plant 1 USA and whose container label bears the ANSI/NSF Mark may be used in potable water treatment applications.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 / formerly Sec. 307, 40 CFR / formerly Sec. 311 :

None of the substances are specifically listed in the regulation.

CLEAN AIR ACT, Sec. 111 (40 CFR 60, Volatile Organic Compounds), Sec. 112 (40 CFR 61, Hazardous Air Pollutants), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances) :

None of the substances are specifically listed in the regulation.

CALIFORNIA PROPOSITION 65 :

Substances known to the State of California to cause cancer are present as an impurity or residue.

MICHIGAN CRITICAL MATERIALS :

None of the substances are specifically listed in the regulation.



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCLEAR® 8173 PULV

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

STATE RIGHT TO KNOW LAWS :

None of the substances are specifically listed in the regulation.

NATIONAL REGULATIONS, CANADA :

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) :

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS CLASSIFICATION :

Not considered a WHMIS controlled product.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) :

The substances in this preparation are listed on the Domestic Substances List (DSL), are exempt, or have been reported in accordance with the New Substances Notification Regulations.

16. OTHER INFORMATION

FCHE080696

Due to our commitment to Product Stewardship, we have evaluated the human and environmental hazards and exposures of this product. Based on our recommended use of this product, we have characterized the product's general risk. This information should provide assistance for your own risk management practices. We have evaluated our product's risk as follows:

* The human risk is: Low

* The environmental risk is: Low

Any use inconsistent with our recommendations may affect the risk characterization. Our sales representative will assist you to determine if your product application is consistent with our recommendations. Together we can implement an appropriate risk management process.

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH., (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.



MATERIAL SAFETY DATA SHEET

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NALCLEAR® 8173 PULV

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(800) 424-9300 (24 Hours) CHEMTREC

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA), (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH, (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Ariel Insight# (An integrated guide to industrial chemicals covered under major regulatory and advisory programs), North American Module, Western European Module, Chemical Inventories Module and the Generics Module (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Prepared By : Product Safety Department
Date issued : 04/25/2000
Replaces : 10/05/1998



Product Bulletin A-NALCLEAR

NALCLEAR® Flocculants

Anionic polymers for Wastewater Treatment

PRODUCT BENEFITS

NALCLEAR anionic flocculants offer the following benefits:

- Wide selection of flocculants for optimal results
- Help maintain compliance on Total Suspended Solids (TSS)
- Help improve equipment throughput by maximizing settling
- Helps minimize sludge volume by formation of a dense sludge

PRINCIPAL USES

NALCLEAR anionic flocculants are a diversified series of extremely high molecular weight organic polymers. These polymers are available in both the convenient liquid emulsion form and in dry form. NALCLEAR flocculants were designed to span a wide range of anionic charge for use in industrial and municipal waste treatment applications:

Metals Industry

- Waste treatment plant clarification/thickening/dewatering
- Lime softening clarification aids
- BOF thickening/dewatering
- Blast furnace thickening/dewatering

Pulp & Paper Mills

- Waste treatment plant clarification/thickening/dewatering
- Raw water clarification

- Flotation separation
- Lime softening clarification aids

Refineries

- Waste treatment plant clarification/thickening/dewatering
- Coke fine settling
- Lime softening clarification aids
- Emulsion breaking aids
- Catalyst fines settling

Chemical Processing

- Waste treatment plant clarification/thickening/dewatering
- Raw water clarification
- Lime softening clarification aids
- Emulsion breaking aids

Municipal

- Waste treatment plant clarification/thickening/dewatering

FEEDING RECOMMENDATIONS

Automatic polymer preparation systems are available from Nalco as pre-engineered, skid-mounted units designed specifically for feeding NALCLEAR flocculants. Your Ondeo Nalco technical representative can assist you with the design and selection of feed equipment for your individual requirements.

SVEZ



GENERAL DESCRIPTION

The properties listed in this table are typical for the NALCLEAR products shown and are not intended to be used for specification purposes. For additional chemical and physical properties, refer to the Material Safety Data Sheets.

NALCLEAR Product Number	Form	Charge	Molecular Weight	Product Viscosity, cp			Solution Viscosity, cp			
				40°F	60°F	70°F	0.50%	1.00%	1.50%	2.00%
7177 Pulv	D	M	H	—	—	—	4150			
7181	E	N	L	2100	200	200	10	18	35	60
7182	E	L	M	6900	1900	1100	225	650		
7744	S	M	H	—	—	—	7	9	10	12
7763	E	M	H	2200	750	700	195	600		
7766 ^{ab}	E	M	H	4000	1700	950	100	545		
7767	E	H	H	940	800	600	300	770		
7768	E	M	VH	800	670	500	225	740		
7769	E	L	M	800	495	495	55	170		
7778 ^b	E	H	M	9000	2100	2000	375	900		
8170 Pulv ^a	D	N	L	—	—	—	40	320		
8173 Pulv ^a	D	M	M	—	—	—	1450	3000		
8181 ^a	E	N	L	2100	200	200	10	18	35	60
8182 ^a	E	L	M	6900	1900	1100	225	650		
8184 ^a	E	M	H	2200	750	700	195	600		
9901	D	M	M	—	—	—	4500			

Form: E = emulsion D = dry S = Solution

Charge: N = Nonionic L = Low M = Medium H = High

Molecular Weight: L = Low; M = Medium; H = High; VH = Very High

^aNSF Standard 60 certified.

^bComplies with FDA regulations under 21 CFR 176.170 governing their use in the manufacture of paper and paperboard intended for contact with aqueous and fatty foods.

MATERIALS COMPATIBILITY

NALCLEAR emulsion flocculants are compatible with carbon steel, fiberglass, stainless steel, PVC and polyethylene for tank and pump construction. Teflon or other inert hydrocarbon material should be used for gaskets and pump seals. Galvanized metals and natural or synthetic rubber should be avoided.

HANDLING

All NALCLEAR flocculants should be handled with care. Read the label and Material Safety Data Sheet for complete handling information before using these products.



LABORATORY SOLUTION PREPARATION

Consult your Nalco representative for optimum product selection and proper testing procedures.

NALCLEAR Liquid Emulsion Flocculants

To put liquid NALCLEAR flocculants into solution, the polymer liquid must be uniformly dispersed in water with a proper amount of mixing energy. The Ondeo Nalco polymer makeup kit (Part No. C0232) contains all the necessary equipment needed to invert latex polymers, but does not contain any polymers.

The following is the makeup procedure for liquid emulsion flocculants.

1. Shake the product sample well to ensure uniformity.
2. Prepare 199 ml of water (deionized or distilled) in a bottle or jar suitable for mixing. Slowly add 1 ml of NALCLEAR flocculant to the vortex created by the mixer for a 0.5% solution.
3. Mix sample for 15–30 seconds with high speed mixer, according to guidelines in the makeup kit.
4. To prepare a more dilute solution for bench testing, use a syringe to withdraw the desired volume of stock solution and add the required quantity of dilution water to obtain the recommended application concentration.
5. Deionized or distilled water should be used for solution makeup when screening products. If such water is not available, tap water should be used. When a product has been selected for further testing, the program cost should be determined using the plant water supply that will be used in the process. In any case, makeup water should be free of insoluble solids, range from 50 to 100°F and contain less than 0.5 ppm total chlorine residual.

NALCLEAR Dry Flocculants

To put dry NALCLEAR flocculants into solution, the dry polymer must be uniformly dispersed in water with a proper amount of mixing energy. The Ondeo Nalco polymer makeup kit (Part No. C0232) contains all the necessary equipment needed to invert the dry polymer, but does not contain any dry polymers.

The following is the makeup procedure for dry polymers.

1. Weigh 0.3–0.6 grams of dry polymer (0.15–0.30% solution).
2. Prepare 199 ml of water (deionized or distilled) in a bottle or jar suitable for mixing. Slowly add weighed dry polymer and allow to “soak” for the time specified on the polymer makeup guidelines (approximately 20–30 minutes).
3. Mix sample for 15–30 seconds with high speed mixer, according to guidelines in the makeup kit.
4. To prepare a more dilute solution for bench testing, use a syringe to withdraw the desired volume of stock solution and add the required quantity of dilution water to obtain the recommended application concentration.
5. Deionized or distilled water should be used for solution makeup when screening products. If such water is not available, tap water should be used. When a product has been selected for further testing, the program cost should be determined using the plant water supply that will be used in the process. In any case, makeup water should be free of insoluble solids, range from 50 to 100°F and contain less than 0.5 ppm total chlorine residual.



STORAGE

NALCLEAR Liquid Emulsion Flocculants

- Store with tanks, drums and PORTA-FEED® units covered to avoid contamination.
- Keep PORTA-FEED units and drums away from heat and open flames. Do not store above 85°F for prolonged periods.
- Avoid freezing.
- Generally have a shelf life of six months in unopened PORTA-FEED units, drums and bulk tanks.
- PORTA-FEED units, drums and bulk must be properly recirculated.

NALCLEAR Dry Flocculants

- Store in cool dry place where the temperature does not exceed 105°F.
- Generally have a shelf life of two years in sealed shipping bags.

SHIPPING

NALCLEAR emulsion flocculants are generally available in 200- or 400-gallon returnable PORTA-FEED® units, in bulk and in 55-gallon nonreturnable polypropylene drums. NALCLEAR dry flocculants are supplied in poly-lined multi-walled bags with an approximate net weight of 50 pounds.

REMARKS

If you need assistance or information, please call your nearest Ondeo Nalco representative, or Customer Care at 800-777-4030. For more news about Ondeo Nalco, visit our website at www.ondeo-nalco.com.

For **Medical and Transportation Emergencies** involving Ondeo Nalco products call (24-hour response): 1-800-424-9300.

Ondeo Nalco Company Ondeo Nalco Center • Naperville, Illinois 60563-1198

SUBSIDIARIES AND AFFILIATES IN PRINCIPAL LOCATIONS AROUND THE WORLD

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NSF Product and Service Listings

These Listings were Last Updated on **Monday, October 13, 2003** at 4:15 AM Eastern Time. Please contact NSF International to confirm the status of any Listing, report errors, or make suggestions.

Warning: NSF is concerned about fraudulent downloading and manipulation of website text. If you have received this listing in hard copy, always confirm this certification/listing information by going directly to <http://www.nsf.org/Certified/PwsChemicals/Listings.asp?Company=32990&Standard=060> for the latest most accurate information.

NSF/ANSI STANDARD 60 Drinking Water Treatment Chemicals - Health Effects

ONDEO NALCO COMPANY

ONDEO NALCO CENTER
NAPERVILLE, IL 60563-1198
630-305-1453

Facility : # 1 USA

Blended Coagulation Chemicals[AL]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
02NT092	Coagulation & Flocculation	100mg/L
8132	Coagulation & Flocculation	100mg/L

[AL] Based on an evaluation of health effects data, the level of aluminum in the finished drinking water should not exceed 2 mg/L.

Miscellaneous Water Supply Products

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
RO PLUS 7286	Reverse Osmosis Antiscalant	[1]
RO PLUS 7287	Reverse Osmosis Antiscalant	[1]

[1] These products are designed to be flushed out prior to using the system for drinking water, following the manufacturer's use instructions.

Polyacrylamide[PC]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Nalclear 7744	Coagulation & Flocculation	1 mg/L
Nalclear 7766 Plus	Coagulation & Flocculation	1 mg/L
Nalclear 7768	Coagulation & Flocculation	1 mg/L
Nalclear 8170 PULV	Coagulation & Flocculation	1 mg/L
Nalclear 8173 PULV	Coagulation & Flocculation	1 mg/L
Nalclear 8181	Coagulation & Flocculation	1 mg/L

Nalclear 8182	Coagulation & Flocculation	.9 mg/L
Nalclear 8472	Coagulation & Flocculation	.9 mg/L
Nalclear 8478	Coagulation & Flocculation	1 mg/L
Nalclear 8772	Coagulation & Flocculation	1 mg/L
Nalclear 8774 Plus	Coagulation & Flocculation	1 mg/L
Optimer 8110 PULV	Coagulation & Flocculation	1 mg/L
Prosedim AEP45101	Coagulation & Flocculation	1mg/L
Prosedim AEP45103	Coagulation & Flocculation	.9mg/L
Prosedim AEP45104	Coagulation & Flocculation	1mg/L
Prosedim ASP45151	Coagulation & Flocculation	1mg/L
Prosedim ASP45153	Coagulation & Flocculation	1mg/L
Prosedim CSP45051	Coagulation & Flocculation	1mg/L
SD46112	Coagulation & Flocculation	1mg/L
SD46140	Coagulation & Flocculation	.9mg/L
SD46147	Coagulation & Flocculation	1mg/L

[PC] Polyacrylamide Products Certified by NSF International comply with 40 CFR 141.111 requirements for percent monomer and dose.

Polyamines[PY]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Cat-Floc KP45352	Coagulation & Flocculation	20mg/L
Nalcolyte 8100	Coagulation & Flocculation	20 mg/L
Nalcolyte 8790	Coagulation & Flocculation	20 mg/L

[PY] Polyamines Certified by NSF International comply with 40 CFR 141.111 requirements : percent monomer and dose.

Polymer Blends[AL]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
02MU159	Coagulation & Flocculation	100mg/L
8133	Coagulation & Flocculation	100mg/L

[AL] Based on an evaluation of health effects data, the level of aluminum in the finished drinking water should not exceed 2 mg/L.

Sodium Aluminate[AL]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Cat-Floc KP45403	Coagulation & Flocculation	100mg/L
Nalco 2	Coagulation & Flocculation	100 mg/L
Nalco 8750	Coagulation & Flocculation	100 mg/L
SD46132	Coagulation & Flocculation	100mg/L

[AL] Based on an evaluation of health effects data, the level of aluminum in the finished drinking water should not exceed 2 mg/L.

Sodium Polyphosphates, Glassy

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
8909 PULV	Corrosion & Scale Control	10 mg/L
Nalco 519 PULV	Corrosion & Scale Control	10 mg/L

Sodium Silicate

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Nalco 2513	Corrosion & Scale Control	25 mg/L

Tetrapotassium Pyrophosphate

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Nalco 2574	Corrosion & Scale Control	29 mg/L
Nalco 7396	Corrosion & Scale Control	29 mg/L

Zinc Chloride[ZN]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Nalco 7384	Corrosion & Scale Control	6 mg/L

[ZN] Based on an evaluation of health effects data, the level of zinc in the finished drinking water should not exceed 2.0 mg/L.

Facility : # 6 USA**Blended Corrosion Inhibitor**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
MSW-101	Corrosion & Scale Control	34mg/L

Blended Phosphates

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
C-5	Corrosion & Scale Control	28mg/L
CL-50	Sequestering Corrosion & Scale Control	28mg/L
CorrGon P45803	Sequestering Corrosion & Scale Control	28mg/L
MSW-106	Sequestering Corrosion & Scale Control	28mg/L
RC-110	Sequestering Corrosion & Scale Control	28mg/L
SD46125	Sequestering Corrosion & Scale Control	28mg/L

Miscellaneous Corrosion Chemicals[ZN]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Nalco 7390	Corrosion & Scale Control	33 mg/L
Nalco 7392	Corrosion Control Sequestering	23 mg/L

[ZN] Based on an evaluation of health effects data, the level of zinc in the finished drinking water should not exceed 2.0 mg/L.

Miscellaneous Water Supply Products[PD]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Nalco 131 DR	Antifoamer	10 mg/L

[PD] Certification is based on a maximum carryover of 50 ug/L DADMAC polymer.

Polymer Blends[AL] [PD] [PY]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
01WT124	Coagulation & Flocculation	100mg/L
Cat-Floc KL-10	Coagulation & Flocculation	125mg/L
Cat-Floc KP45501	Coagulation & Flocculation	125mg/L
SD46121	Coagulation & Flocculation	125mg/L

[AL] Based on an evaluation of health effects data, the level of aluminum in the finished drinking water should not exceed 2 mg/L.

[PD] Certification is based on a maximum carryover of 50 ug/L DADMAC polymer.

[PY] Polyamines Certified by NSF International comply with 40 CFR 141.111 requirements : percent monomer and dose.

Zinc Chloride[ZN]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Nalco 7384	Corrosion & Scale Control	6 mg/L

[ZN] Based on an evaluation of health effects data, the level of zinc in the finished drinking water should not exceed 2.0 mg/L.

Facility : # 8 USA

Blended Phosphates

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
C-5	Corrosion & Scale Control Sequestering	28mg/L
CL-50	Corrosion & Scale Control Sequestering	28mg/L
CorrGon P45803	Corrosion & Scale Control Sequestering	28mg/L
MSW-106	Corrosion & Scale Control Sequestering	28mg/L
RC-110	Corrosion & Scale Control Sequestering	28mg/L
SD46125	Corrosion & Scale Control Sequestering	28mg/L

Miscellaneous Water Supply Products

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
EL-5600	Reverse Osmosis Antiscalant	7mg/L
PermaTreat® PC-1850	Reverse Osmosis Antiscalant	7mg/L
RC-956	Reverse Osmosis Antiscalant	7mg/L
SD46044	Reverse Osmosis Antiscalant	7mg/L

Poly (Diallyldimethylammonium Chloride)(pDADMAC)[PD]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Nalcolyte 8102	Coagulation & Flocculation	15mg/L
Nalcolyte 8792	Coagulation & Flocculation	15mg/L

[PD] Certification is based on a maximum carryover of 50 ug/L DADMAC polymer.

Facility : # 20 USA

Polyaluminum Chloride[AL]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Aluminex 5	Coagulation & Flocculation	250mg/L

[AL] Based on an evaluation of health effects data, the level of aluminum in the finished drinking water should not exceed 2 mg/L.

Facility : # 21 CANADA

Polyaluminum Chloride[AL]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Aluminex 5	Coagulation & Flocculation	250mg/L

[AL] Based on an evaluation of health effects data, the level of aluminum in the finished drinking water should not exceed 2 mg/L.

Polymer Blends

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Aluminex 6	Coagulation & Flocculation	166mg/L
Aluminex 7[AL] [PD]	Coagulation & Flocculation	217mg/L

[AL] Based on an evaluation of health effects data, the level of aluminum in the finished drinking water should not exceed 2 mg/L.

[PD] Certification is based on a maximum carryover of 50 ug/L DADMAC polymer.

Facility : # 22 CANADA

Polyaluminum Chloride[AL]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Aluminex 5	Coagulation & Flocculation	250mg/L

[AL] Based on an evaluation of health effects data, the level of aluminum in the finished drinking water should not exceed 2 mg/L.

Polymer Blends

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Aluminex 6	Coagulation & Flocculation	133mg/L

Facility : # 23 USA

Polyaluminum Chloride[AL]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Cat-Floc 4900	Coagulation & Flocculation	180mg/L
Cat-Floc KP45402	Coagulation & Flocculation	180mg/L
Ultrion® 8187	Coagulation & Flocculation	180mg/L

[AL] Based on an evaluation of health effects data, the level of aluminum in the finished drinking water should not exceed 2 mg/L.

Polymer Blends[AL] [PD] [PY]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Cat-Floc KP45504	Coagulation & Flocculation	66mg/L
Cat-Floc KP45508	Coagulation & Flocculation	40mg/L
SD46108	Coagulation & Flocculation	66mg/L
SD46109	Coagulation & Flocculation	40mg/L
Ultrion® 8185	Coagulation & Flocculation	40 mg/L
Ultrion® 8186	Coagulation & Flocculation	66 mg/L

[AL] Based on an evaluation of health effects data, the level of aluminum in the finished drinking water should not exceed 2 mg/L.

[PD] Certification is based on a maximum carryover of 50 ug/L DADMAC polymer.

[PY] Polyamines Certified by NSF International comply with 40 CFR 141.111 requirements : percent monomer and dose.

Facility : # 26 CHINA**Sodium Polyphosphates, Glassy**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Calgon 73191 Regular	Corrosion & Scale Control	11mg/L
Calgon 73193 Unadjusted Glass	Corrosion & Scale Control	11mg/L
Calgon 73194 Crushed	Corrosion & Scale Control	11mg/L
Calgon Composition CompR	Corrosion & Scale Control	11mg/L
CorrGON P45805	Corrosion & Scale Control	11mg/L
MSW-600	Corrosion & Scale Control	11mg/L
SD46063	Corrosion & Scale Control	11mg/L
SD46064	Corrosion & Scale Control	11mg/L
SD46128	Corrosion & Scale Control	11mg/L

Facility : # 27 USA**Sodium Polyphosphates, Glassy**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Calgon 73191 Regular	Corrosion & Scale Control	11.1mg/L
Calgon 73193 Unadjusted Glass	Sequestering Corrosion & Scale Control	11.1mg/L

Calgon 73194 Crushed	Corrosion & Scale Control Sequestering	11.1mg/L
Calgon Composition CompR	Corrosion & Scale Control Sequestering	11.1mg/L
CorrGON P45805	Corrosion & Scale Control Sequestering	11.1mg/L
MSW-600	Corrosion & Scale Control Sequestering	11.1mg/L
SD46063	Corrosion & Scale Control Sequestering	11.1mg/L
SD46064	Corrosion & Scale Control Sequestering	11.1mg/L
SD46128	Corrosion & Scale Control Sequestering	11.1mg/L

Facility : # 29 USA**Ferric Sulfate***Trade Designation*

CatFloc KP45451

Ferralyte 8131

PermaFloc PC-60

Product Function

Coagulation & Flocculation

Coagulation & Flocculation

Coagulation & Flocculation

Max Use

600mg/L

600mg/L

600mg/L

Facility : #102 USA**Blended Corrosion Inhibitor***Trade Designation*

Calgon 71920

SD46054

Product Function

Corrosion & Scale Control

Sequestering

Corrosion & Scale Control

Sequestering

Max Use

15mg/L

15mg/L

Blended Phosphates*Trade Designation*

C-40

Product Function

Corrosion & Scale Control

Sequestering

Max Use

11mg/L

Miscellaneous Corrosion Chemicals[ZN]*Trade Designation*

C-8

CorrGon P45804

SD46127

Product Function

Corrosion Control

Sequestering

Corrosion Control

Sequestering

Corrosion Control

Sequestering

Max Use

16mg/L

16mg/L

16mg/L

[2N] Based on an evaluation of health effects data, the level of zinc in the finished drinking water should not exceed 2.0 mg/L.

Facility : #109 USA

Ferric Sulfate

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Cat-Floc KP45451	Coagulation & Flocculation	300mg/L
Ferralyte 8131	Coagulation & Flocculation	300 mg/L
PermaFloc™ PC-607	Coagulation & Flocculation	300mg/L

Miscellaneous Chemical Products

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Nalco 2490	Coagulation & Flocculation Filtration Aid	5mg/L
PermaFloc™ PC-305	Coagulation & Flocculation Filtration Aid	5mg/L

Miscellaneous Corrosion Chemicals

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Nalco 7399	Corrosion & Scale Control	40mg/L
Nalco 8759	Corrosion & Scale Control	40mg/L
WS-134P	Corrosion & Scale Control	40mg/L

Miscellaneous Water Supply Products

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
EL-5600	Reverse Osmosis Antiscalant	7mg/L
PermaClean® PC-87[1]	Reverse Osmosis Antiscalant	NA
PermaTreat® PC-1850	Reverse Osmosis Antiscalant	7mg/L
RC-956	Reverse Osmosis Antiscalant	7mg/L
SD46044	Reverse Osmosis Antiscalant	7mg/L

[1] These products are designed to be used off-line and flushed out prior to using the system for drinking water, following manufacturer's use instructions.

Poly (Diallyldimethylammonium Chloride)(pDADMAC)[PD]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
8108 Plus	Coagulation & Flocculation	50mg/L
8958 Plus	Coagulation & Flocculation	50mg/L
Cat-Floc 71259	Coagulation & Flocculation	23mg/L
Cat-Floc 8102 Plus	Coagulation & Flocculation	50mg/L
Cat-Floc 8103 Plus	Coagulation & Flocculation	57mg/L
Cat-Floc 8792 Plus	Coagulation & Flocculation	50mg/L
Cat-Floc 8793 Plus	Coagulation & Flocculation	57mg/L
Cat-Floc 8799 Plus	Coagulation & Flocculation	25mg/L
Cat-Floc CFC	Coagulation & Flocculation	25mg/L
Cat-Floc CFCL	Coagulation & Flocculation	25mg/L
Cat-Floc CFT	Coagulation & Flocculation	50mg/L
Cat-Floc CFTL	Coagulation & Flocculation	50mg/L

Cat-Floc CL	Coagulation & Flocculation	25mg/L
Cat-Floc CL-M	Coagulation & Flocculation	25mg/L
Cat-Floc DL	Coagulation & Flocculation	57mg/L
Cat-Floc KP45302	Coagulation & Flocculation	100mg/L
Cat-Floc KP45304	Coagulation & Flocculation	57mg/L
Cat-Floc KP45305	Coagulation & Flocculation	25mg/L
Cat-Floc KP45306	Coagulation & Flocculation	50mg/L
Cat-Floc KP45307	Coagulation & Flocculation	23mg/L
Cat-Floc L	Coagulation & Flocculation	50mg/L
Cat-Floc LS	Coagulation & Flocculation	100mg/L
Cat-Floc TL	Coagulation & Flocculation	50mg/L
E-1372	Coagulation & Flocculation	50mg/L
E-2231	Coagulation & Flocculation	100mg/L
E-905	Coagulation & Flocculation	50mg/L
KP45301	Coagulation & Flocculation	50mg/L
KP45302	Coagulation & Flocculation	100mg/L
Nalcolyte 8102	Coagulation & Flocculation	15 mg/L
Nalcolyte 8103	Coagulation & Flocculation	41.6 mg/L
Nalcolyte 8108	Coagulation & Flocculation	33.3 mg/L
Nalcolyte 8792	Coagulation & Flocculation	15 mg/L
Nalcolyte 8793	Coagulation & Flocculation	41.6 mg/L
Nalcolyte 8799	Coagulation & Flocculation	10 mg/L
Nalcolyte 8958	Coagulation & Flocculation	33.3 mg/L
Nalkat 8674	Coagulation & Flocculation	10mg/L
PermaFloc™ PC-306	Coagulation & Flocculation	57mg/L
SD46101	Coagulation & Flocculation	50mg/L
SD46102	Coagulation & Flocculation	100mg/L
SD46104	Coagulation & Flocculation	57mg/L
SD46105	Coagulation & Flocculation	25mg/L
SD46106	Coagulation & Flocculation	50mg/L
SD46120	Coagulation & Flocculation	23mg/L
SD46160	Coagulation & Flocculation	25mg/L
VeliGON CL-M	Coagulation & Flocculation	25mg/L
	Molluscicide	
VeliGON DL-M	Coagulation & Flocculation	57mg/L
	Molluscicide	
VeliGON LS-M	Coagulation & Flocculation	100mg/L
	Molluscicide	
VeliGON T-2-M	Coagulation & Flocculation	23mg/L
	Molluscicide	
VeliGON TL-M	Coagulation & Flocculation	50mg/L
	Molluscicide	

[PD] Certification is based on a maximum carryover of 50 ug/L DADMAC polymer.

Polyacrylamide[PC]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Nalclear 7744	Coagulation & Flocculation	1 mg/L
Nalclear 7766 Plus	Coagulation & Flocculation	1 mg/L
Nalclear 7768	Coagulation & Flocculation	1 mg/L

Nalclear 8181	Coagulation & Flocculation	1 mg/L
Nalclear 8182	Coagulation & Flocculation	.9 mg/L
Nalclear 8184	Coagulation & Flocculation Filtration Aid	1 mg/L
Nalclear 8472	Coagulation & Flocculation	.9 mg/L
Nalclear 8478	Coagulation & Flocculation	1 mg/L
Nalclear 8771	Coagulation & Flocculation Filtration Aid	1 mg/L
Nalclear 8772	Coagulation & Flocculation	1 mg/L
Nalclear 8774	Coagulation & Flocculation	1 mg/L
Nalco 1C34	Coagulation & Flocculation	1 mg/L
Nalco ASP-700	Drilling Fluid	NA
Optimer 7128	Coagulation & Flocculation	1 mg/L
Optimer 7190 Plus	Coagulation & Flocculation	1 mg/L
Optimer 7199	Coagulation & Flocculation	1 mg/L
PermaFloc™ PC-707	Coagulation & Flocculation	1mg/L
Prosedim AEP45101	Coagulation & Flocculation	1mg/L
Prosedim AEP45103	Coagulation & Flocculation	.9mg/L
Prosedim AEP45104	Coagulation & Flocculation	1mg/L
Prosedim AEP45105	Coagulation & Flocculation	1mg/L
Prosedim CEP45001	Coagulation & Flocculation	1mg/L
Prosedim CEP45002	Coagulation & Flocculation	1mg/L
SD46059	Coagulation & Flocculation	1mg/L
SD46066	Coagulation & Flocculation	1mg/L
SD46110	Coagulation & Flocculation	1mg/L
SD46111	Coagulation & Flocculation	1mg/L
SD46112	Coagulation & Flocculation	1mg/L
SD46113	Coagulation & Flocculation Filtration Aid	1mg/L
SD46114	Coagulation & Flocculation	1mg/L
SD46140	Coagulation & Flocculation	.9mg/L
SD46147	Coagulation & Flocculation	1mg/L
T-100	Drilling Fluid	NA
T-150 MUD	Well Drilling Aid	1mg/L

[PC] Polyacrylamide Products Certified by NSF International comply with 40 CFR 141.111 requirements for percent monomer and dose.

Polyamines[PY]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Cat-Floc KP45351	Coagulation & Flocculation	20mg/L
Cat-Floc KP45352	Coagulation & Flocculation	20mg/L
Nalclear 8790	Coagulation & Flocculation	20 mg/L
Nalcolyte 8100	Coagulation & Flocculation	20 mg/L
Nalcolyte 8105	Coagulation & Flocculation	20 mg/L
Nalcolyte 8795	Coagulation & Flocculation	20 mg/L
PermaFloc™ PC-407	Coagulation & Flocculation	20mg/L
SD46100	Coagulation & Flocculation	20mg/L
SD46131	Coagulation & Flocculation	20mg/L

[PY] Polyamines Certified by NSF International comply with 40 CFR 141.111 requirements :

percent monomer and dose.

Polymer Blends[AL] [PD] [PY]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Cat-Floc KP45502	Coagulation & Flocculation Filtration Aid	77mg/L
Cat-Floc KP45504	Coagulation & Flocculation	66mg/L
Cat-Floc KP45505	Coagulation & Flocculation	88mg/L
Cat-Floc KP45506	Coagulation & Flocculation	97mg/L
Cat-Floc KP45507	Coagulation & Flocculation	102mg/L
Cat-Floc KP45508	Coagulation & Flocculation	40mg/L
Cat-Floc KP45551	Coagulation & Flocculation	150mg/L
Ferralyte 8130	Coagulation & Flocculation	150 mg/L
PermaFloc™ PC-603	Coagulation & Flocculation	150mg/L
SD46108	Coagulation & Flocculation	66mg/L
SD46109	Coagulation & Flocculation	40mg/L
SD46134	Coagulation & Flocculation Filtration Aid	77mg/L
SD46136	Coagulation & Flocculation	88mg/L
SD46137	Coagulation & Flocculation	97mg/L
SD46138	Coagulation & Flocculation	102mg/L
Ultrion 8155	Coagulation & Flocculation	88 mg/L
Ultrion 8156	Coagulation & Flocculation	97 mg/L
Ultrion 8157	Coagulation & Flocculation	102 mg/L
Ultrion 8159	Coagulation & Flocculation Filtration Aid	77 mg/L
Ultrion 8185	Coagulation & Flocculation	40 mg/L
Ultrion 8186	Coagulation & Flocculation	66 mg/L
Ultrion 8768	Coagulation & Flocculation	102 mg/L
Ultrion 8905	Coagulation & Flocculation	88 mg/L
Ultrion SVC 7002	Coagulation & Flocculation	106mg/L
Ultrion SVC 7014	Coagulation & Flocculation	106mg/L
Ultrion SVC 7018	Coagulation & Flocculation	106mg/L

[AL] Based on an evaluation of health effects data, the level of aluminum in the finished drinking water should not exceed 2 mg/L.

[PD] Certification is based on a maximum carryover of 50 ug/L DADMAC polymer.

[PY] Polyamines Certified by NSF International comply with 40 CFR 141.111 requirements : percent monomer and dose.

Sodium Aluminate[AL]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Cat-Floc KP45403	Coagulation & Flocculation	100mg/L
Nalco 2	Coagulation & Flocculation	100 mg/L
Nalco 8750	Coagulation & Flocculation	100 mg/L
SD46132	Coagulation & Flocculation	100mg/L

[AL] Based on an evaluation of health effects data, the level of aluminum in the finished drinking water should not exceed 2 mg/L.

Zinc Chloride[ZN]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
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Nalco 7384 Corrosion & Scale Control 6 mg/L

[ZN] Based on an evaluation of health effects data, the level of zinc in the finished drinking water should not exceed 2.0 mg/L.

Facility : #111 USA

Blended Corrosion Inhibitor

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
C-31	Corrosion & Scale Control Sequestering	29 mg/L
C-4	Corrosion & Scale Control Sequestering	34 mg/L
C-41	Corrosion & Scale Control Sequestering	25 mg/L
CorrGon 45802	Corrosion & Scale Control Sequestering	34mg/L
MSW-101	Corrosion & Scale Control Sequestering	34 mg/L
SD46124	Corrosion & Scale Control Sequestering	34mg/L

Blended Phosphates

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
C-5	Corrosion & Scale Control Sequestering	28 mg/L
CL-50	Corrosion & Scale Control Sequestering	28 mg/L
CorrGon P45803	Corrosion & Scale Control Sequestering	28mg/L
MSW-106	Corrosion & Scale Control Sequestering	28 mg/L
RC-110	Corrosion & Scale Control Sequestering	28 mg/L
SD46125	Corrosion & Scale Control Sequestering	28mg/L

Miscellaneous Water Supply Products[1]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
EL-5600	Reverse Osmosis Antiscalant	7 mg/L
PermaTreat [®] PC-1850	Reverse Osmosis Antiscalant	7mg/L
RC-956	Reverse Osmosis Antiscalant	7 mg/L
SD46044	Reverse Osmosis Antiscalant	7mg/L

[1] Certified for addition to the feedwater for reverse osmosis applications only.

Phosphoric Acid

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
C-36	Corrosion & Scale Control	24mg/L

pH Adjustment

Poly (Diallyldimethylammonium Chloride)(pDADMAC)[PD]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Cat-Floc 71259	Coagulation & Flocculation	23mg/L
Cat-Floc 8102 Plus	Coagulation & Flocculation	50mg/L
Cat-Floc 8103 Plus	Coagulation & Flocculation	57mg/L
Cat-Floc 8792 Plus	Coagulation & Flocculation	50mg/L
Cat-Floc 8793 Plus	Coagulation & Flocculation	57mg/L
Cat-Floc 8799 Plus	Coagulation & Flocculation	25mg/L
Cat-Floc A	Coagulation & Flocculation	81mg/L
Cat-Floc CFC	Coagulation & Flocculation	25mg/L
Cat-Floc CFCL	Coagulation & Flocculation	25mg/L
Cat-Floc CFT	Coagulation & Flocculation	50mg/L
Cat-Floc CFTL	Coagulation & Flocculation	50mg/L
Cat-Floc CL	Coagulation & Flocculation	25mg/L
Cat-Floc DL	Coagulation & Flocculation	57mg/L
Cat-Floc EL	Coagulation & Flocculation	26mg/L
Cat-Floc KP45302	Coagulation & Flocculation	100mg/L
Cat-Floc KP45303	Coagulation & Flocculation	26mg/L
Cat-Floc KP45304	Coagulation & Flocculation	57mg/L
Cat-Floc KP45305	Coagulation & Flocculation	25mg/L
Cat-Floc KP45306	Coagulation & Flocculation	50mg/L
Cat-Floc KP45307	Coagulation & Flocculation	23mg/L
Cat-Floc L	Coagulation & Flocculation	50mg/L
Cat-Floc LS	Coagulation & Flocculation	100 mg/L
Cat-Floc T	Coagulation & Flocculation	50 mg/L
Cat-Floc T-2	Coagulation & Flocculation	23mg/L
Cat-Floc TL	Coagulation & Flocculation	50 mg/L
E-1372	Coagulation & Flocculation	50mg/L
E-2231	Coagulation & Flocculation	100 mg/L
E-905	Coagulation & Flocculation	50 mg/L
PermaFloc™ PC-306	Coagulation & Flocculation	57mg/L
SD46101	Coagulation & Flocculation	50mg/L
SD46102	Coagulation & Flocculation	100mg/L
SD46103	Coagulation & Flocculation	26mg/L
SD46104	Coagulation & Flocculation	57mg/L
SD46105	Coagulation & Flocculation	25mg/L
SD46106	Coagulation & Flocculation	50mg/L
SD46120	Coagulation & Flocculation	23mg/L
	Molluscicide	
SD46160	Coagulation & Flocculation	25mg/L
VeliGON DL-M	Coagulation & Flocculation	57mg/L
	Molluscicide	
VeliGON L-M	Coagulation & Flocculation	50mg/L
	Molluscicide	
Veligon CL-M	Molluscicide	25mg/L
	Coagulation & Flocculation	
Veligon LS-M	Coagulation & Flocculation	100 mg/L
	Molluscicide	

Veligon T-2-M	Molluscicide	23mg/L
	Coagulation & Flocculation	
Veligon TL-M	Coagulation & Flocculation	50 mg/L
	Molluscicide	

[PD] Certification is based on a maximum carryover of 50 ug/L DADMAC polymer.

Polymer Blends[AL] [PD]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Cat-Floc 4954	Coagulation & Flocculation	100mg/L
Cat-Floc KL-10	Coagulation & Flocculation	125mg/L
Cat-Floc KP45501	Coagulation & Flocculation	125mg/L
Cat-Floc KP45504	Coagulation & Flocculation	66mg/L
SD46108	Coagulation & Flocculation	66mg/L
SD46121	Coagulation & Flocculation	125mg/L
Ultrion® 8186	Coagulation & Flocculation	66mg/L

[AL] Based on an evaluation of health effects data, the level of aluminum in the finished drinking water should not exceed 2 mg/L.

[PD] Certification is based on a maximum carryover of 50 ug/L DADMAC polymer.

Tetrapotassium Pyrophosphate

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
2574	Corrosion & Scale Control	27mg/L
	Sequestering	
7396	Corrosion & Scale Control	27mg/L
	Sequestering	
C-2	Corrosion & Scale Control	27mg/L
	Sequestering	
Corrgon P45806	Corrosion & Scale Control	42mg/L
	Sequestering	
MSW-105	Corrosion & Scale Control	27mg/L
	Sequestering	
WS-136P	Corrosion & Scale Control	27mg/L
	Sequestering	

Zinc Orthophosphate[ZN]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
C-101	Corrosion & Scale Control	23mg/L
	Sequestering	
C-9	Corrosion & Scale Control	15mg/L
	Sequestering	
C-9L Corrosion Inhibitor	Corrosion & Scale Control	26mg/L
	Sequestering	
CL-9700 Corrosion Inhibitor	Corrosion & Scale Control	15mg/L
	Sequestering	
CorrGon P45801	Corrosion & Scale Control	15mg/L
	Sequestering	
MSW-109	Corrosion & Scale Control	15mg/L
	Sequestering	
RC-122	Corrosion & Scale Control	15mg/L

SD46123	Sequestering Corrosion & Scale Control	15mg/L
SD46126	Sequestering Corrosion & Scale Control Sequestering	26mg/L

[ZN] Based on an evaluation of health effects data, the level of zinc in the finished drinking water should not exceed 2.0 mg/L.

Facility : #133 USA

Miscellaneous Water Supply Products

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
PermaClean [®] PC-33[2] [3]	Other	NA
PermaClean [®] PC-67[2] [4]	Other	NA
PermaClean [®] PC-77[2] [4]	Other	NA
PermaClean [®] PC-87[4]	Reverse Osmosis Antiscalant	NA
PermaTreat [®] PC-100[1]	Reverse Osmosis Antiscalant	2.5mg/L
PermaTreat [®] PC-1020	Reverse Osmosis Antiscalant	26mg/L
PermaTreat [®] PC-185[1]	Reverse Osmosis Antiscalant	5mg/L
PermaTreat [®] PC-191	Reverse Osmosis Antiscalant	5mg/L
PermaTreat [®] PC-191T	Reverse Osmosis Antiscalant	5mg/L
PermaTreat [®] PC-391	Reverse Osmosis Antiscalant	5mg/L
PermaTreat [®] PC-510[1]	Reverse Osmosis Antiscalant	10mg/L

[1] Certified for addition to the feedwater for reverse osmosis applications only.

[2] Membrane cleaner

[3] Designed to be used off-line. Product must be flushed and drained before being placed into service. The pH of the influent and effluent water should be monitored to ensure that all traces of the product have been removed before placing into service.

[4] Designed to be used off-line. These products are designed to be flushed out prior to using the system for drinking water, following the manufacturer's use instructions.

Sodium Tripolyphosphate

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
W-139P	Corrosion & Scale Control Sequestering	12.9mg/L

Tetrapotassium Pyrophosphate

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
CorrGon P45806	Corrosion & Scale Control Sequestering	42mg/L
WS-134P	Corrosion & Scale Control	45mg/L
WS-136P	Corrosion & Scale Control	29mg/L

Facility : #138 USA

Blended Phosphates

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
C-5	Corrosion & Scale Control	28mg/L
	Sequestering	
CL-50	Corrosion & Scale Control	28mg/L
	Sequestering	
CorrGon P45803	Corrosion & Scale Control	28mg/L
	Sequestering	
MSW-106	Corrosion & Scale Control	28mg/L
	Sequestering	
RC-110	Corrosion & Scale Control	28mg/L
	Sequestering	
SD46125	Corrosion & Scale Control	28mg/L
	Sequestering	

Miscellaneous Water Supply Products[1]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
EL-5600	Reverse Osmosis Antiscalant	7mg/L
PermaClean® PC-87	Reverse Osmosis Antiscalant	NA
PermaTreat® PC-1850	Reverse Osmosis Antiscalant	7mg/L
RC-956	Reverse Osmosis Antiscalant	7mg/L
SD46044	Reverse Osmosis Antiscalant	7mg/L

[1] These products are designed to be used off-line and flushed out prior to using the system for drinking water, following manufacturer's use instructions.

Facility : #140 USA**Blended Corrosion Inhibitor**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
C-31	Corrosion & Scale Control	29 mg/L
	Sequestering	
C-4	Corrosion & Scale Control	33 mg/L
	Sequestering	
C-41	Corrosion & Scale Control	25 mg/L
	Sequestering	
Calgon 71920	Corrosion & Scale Control	15 mg/L
	Sequestering	
CorrGon P45802	Corrosion & Scale Control	34mg/L
MSW-101	Corrosion & Scale Control	33 mg/L
	Sequestering	
Nalco 8488 PULV	Corrosion & Scale Control	15mg/L
Nalco 918 PULV	Corrosion & Scale Control	15mg/L
Nalco 936 PULV[ZN]	Corrosion & Scale Control	18mg/L
	Sequestering	
SD46054	Corrosion & Scale Control	15mg/L
	Sequestering	

[ZN] Based on an evaluation of health effects data, the level of zinc in the finished drinking water should not exceed 2.0 mg/L.

Blended Phosphates

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
C-40	Corrosion & Scale Control Sequestering	11 mg/L
C-5	Corrosion & Scale Control Sequestering	28 mg/L
CL-50	Corrosion & Scale Control Sequestering	28 mg/L
CorrGon P45803	Corrosion & Scale Control Sequestering	28mg/L
MSW-106	Corrosion & Scale Control Sequestering	28 mg/L
RC-110	Corrosion & Scale Control Sequestering	28 mg/L
SD46125	Corrosion & Scale Control Sequestering	28mg/L

Hectorite

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Coagulant Aid 25	Coagulation & Flocculation	200 mg/L

Miscellaneous Corrosion Chemicals

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
10 CL	Corrosion & Scale Control Sequestering	11 mg/L
6-R Micromet	Corrosion & Scale Control Sequestering	11 mg/L
73182	Corrosion & Scale Control Sequestering	11 mg/L
Adjusted RS-1	Corrosion & Scale Control Sequestering	11.5 mg/L
BLR-3715	Corrosion & Scale Control Sequestering	7 mg/L
C-39 Corrosion Inhibitor	Corrosion & Scale Control Sequestering	14 mg/L
C-8[ZN]	Corrosion & Scale Control Sequestering	16 mg/L
Calgon CompT	Corrosion & Scale Control Sequestering	14 mg/L
Calgon Composition TG-10	Corrosion & Scale Control Sequestering	14 mg/L
CorrGon P45804[ZN]	Corrosion & Scale Control Sequestering	16mg/L
FP-102	Corrosion & Scale Control Sequestering	14 mg/L
Gran 39	Corrosion & Scale Control Sequestering	14 mg/L

MSW-510	Corrosion & Scale Control	13 mg/L
MSW-539	Corrosion & Scale Control	14 mg/L
	Sequestering	
MSW-540	Corrosion & Scale Control	14 mg/L
Micromet 73139 Plates	Corrosion & Scale Control	11 mg/L
	Sequestering	
Micromet Crystals	Corrosion & Scale Control	11 mg/L
	Sequestering	
Nalco 7399	Corrosion & Scale Control	40mg/L
Nalco 8759	Corrosion & Scale Control	40mg/L
RC-101	Corrosion & Scale Control	13 mg/L
	Sequestering	
RC-104	Corrosion & Scale Control	11 mg/L
	Sequestering	
SD46047	Corrosion & Scale Control	7mg/L
	Sequestering	
SD46127[ZN]	Corrosion & Scale Control	16mg/L
	Sequestering	
SD46129	Corrosion & Scale Control	14mg/L
	Sequestering	
SD46130	Corrosion & Scale Control	14mg/L
	Sequestering	
SP-6RS	Corrosion & Scale Control	11 mg/L
	Sequestering	
WS-134P	Corrosion & Scale Control	40mg/L

[ZN] Based on an evaluation of health effects data, the level of zinc in the finished drinking water should not exceed 2.0 mg/L.

Miscellaneous Water Supply Products

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
EL-5300[1]	Distillation Antiscalant	5 mg/L
	Reverse Osmosis Antiscalant	
EL-5301[1]	Distillation Antiscalant	5 mg/L
	Reverse Osmosis Antiscalant	
EL-5600	Reverse Osmosis Antiscalant	7 mg/L
PermaTreat® PC-1850	Reverse Osmosis Antiscalant	7mg/L
RC-956	Reverse Osmosis Antiscalant	7 mg/L
SD46044	Reverse Osmosis Antiscalant	7mg/L

[1] Certification of this product is for use in reverse osmosis or distillation applications only.

Phosphoric Acid

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
C-36	Corrosion & Scale Control	24 mg/L
	pH Adjustment	

Poly (Diallyldimethylammonium Chloride)(pDADMAC)[PD]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Cat-Floc 71259	Coagulation & Flocculation	23 mg/L

Cat-Floc 8102 Plus	Coagulation & Flocculation	50 mg/L
Cat-Floc 8103 Plus	Coagulation & Flocculation	57 mg/L
Cat-Floc 8108 Plus	Coagulation & Flocculation	50 mg/L
Cat-Floc 8792 Plus	Coagulation & Flocculation	50 mg/L
Cat-Floc 8793 Plus	Coagulation & Flocculation	57 mg/L
Cat-Floc 8799 Plus	Coagulation & Flocculation	25 mg/L
Cat-Floc 8958 Plus	Coagulation & Flocculation	50 mg/L
Cat-Floc CFA	Coagulation & Flocculation	74 mg/L
Cat-Floc CFCL	Coagulation & Flocculation	25 mg/L
Cat-Floc CFL	Coagulation & Flocculation	50mg/L
Cat-Floc CFT	Coagulation & Flocculation	50mg/L
Cat-Floc CFTL	Coagulation & Flocculation	50 mg/L
Cat-Floc CL	Coagulation & Flocculation	25 mg/L
Cat-Floc DL	Coagulation & Flocculation	57 mg/L
Cat-Floc EL	Coagulation & Flocculation	26 mg/L
Cat-Floc KP45301	Coagulation & Flocculation	50mg/L
Cat-Floc KP45302	Coagulation & Flocculation	100mg/L
Cat-Floc KP45303	Coagulation & Flocculation	26mg/L
Cat-Floc KP45304	Coagulation & Flocculation	57mg/L
Cat-Floc KP45305	Coagulation & Flocculation	25mg/L
Cat-Floc KP45306	Coagulation & Flocculation	50mg/L
Cat-Floc KP45307	Coagulation & Flocculation	23mg/L
Cat-Floc KP45401	Coagulation & Flocculation	57mg/L
Cat-Floc L	Coagulation & Flocculation	50 mg/L
Cat-Floc LS	Coagulation & Flocculation	100 mg/L
Cat-Floc T	Coagulation & Flocculation	50mg/L
Cat-Floc TL	Coagulation & Flocculation	50 mg/L
E-1372	Coagulation & Flocculation	50 mg/L
E-2231	Coagulation & Flocculation	100 mg/L
E-905	Coagulation & Flocculation	50 mg/L
PermaFloc™ PC-306	Coagulation & Flocculation	57mg/L
SD46101	Coagulation & Flocculation	50mg/L
SD46102	Coagulation & Flocculation	100mg/L
SD46103	Coagulation & Flocculation	26mg/L
SD46104	Coagulation & Flocculation	57mg/L
SD46105	Coagulation & Flocculation	25mg/L
SD46106	Coagulation & Flocculation	50mg/L
SD46120	Coagulation & Flocculation	23mg/L
SD46160	Coagulation & Flocculation	25mg/L
VeliGON CL-M	Molluscicide	25 mg/L
	Coagulation & Flocculation	
VeliGON DL-M	Molluscicide	57 mg/L
	Coagulation & Flocculation	
VeliGON L-M	Molluscicide	50 mg/L
	Coagulation & Flocculation	
VeliGON LS-M	Molluscicide	100 mg/L
	Coagulation & Flocculation	
VeliGON T-2-M	Molluscicide	23 mg/L
	Coagulation & Flocculation	
VeliGON TL-M	Coagulation & Flocculation	50mg/L

Molluscicide

[PD] Certification is based on a maximum carryover of 50 ug/L DADMAC polymer.

Polyacrylamide[PC]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
E-2176	Coagulation & Flocculation	.8 mg/L
E-2279	Coagulation & Flocculation	.5 mg/L
Nalclear 7744	Coagulation & Flocculation	1mg/L
Nalclear 7766 Plus	Coagulation & Flocculation	1mg/L
Nalclear 7768	Coagulation & Flocculation	1mg/L
Nalclear 8182	Coagulation & Flocculation	.9mg/L
Nalclear 8472	Coagulation & Flocculation	.9mg/L
Nalclear 8478	Coagulation & Flocculation	1mg/L
Nalclear 8774	Coagulation & Flocculation	1mg/L
Optimer 7128	Coagulation & Flocculation	1mg/L
Optimer 7199	Coagulation & Flocculation	1mg/L
PermaFloc™ PC-707	Coagulation & Flocculation	1mg/L
Pol-E-Z 652	Coagulation & Flocculation	3mg/L
Pol-E-Z 675	Coagulation & Flocculation	3.5 mg/L
Pol-E-Z 692	Coagulation & Flocculation	.5 mg/L
Pol-E-Z 8736	Coagulation & Flocculation	.8 mg/L
Prosedim AEP45102	Coagulation & Flocculation	3.5mg/L
Prosedim AEP45103	Coagulation & Flocculation	.9mg/L
Prosedim AEP45104	Coagulation & Flocculation	1mg/L
Prosedim CEP45002	Coagulation & Flocculation	1mg/L
SD46049	Coagulation & Flocculation	.5mg/L
SD46059	Coagulation & Flocculation	1mg/L
SD46066	Coagulation & Flocculation	1mg/L
SD46112	Coagulation & Flocculation	1mg/L
SD46114	Coagulation & Flocculation	1mg/L
SD46139	Coagulation & Flocculation	35mg/L
SD46140	Coagulation & Flocculation	.9mg/L
SD46147	Coagulation & Flocculation	1mg/L

[PC] Polyacrylamide Products Certified by NSF International comply with 40 CFR 141.111 requirements for percent monomer and dose.

Polyacrylic Acid

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
EL-4010	Reverse Osmosis Antiscalant	7 mg/L
SD46061	Coagulation & Flocculation	7mg/L

Polyaluminum Chloride[AL]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Aluminex-1	Coagulation & Flocculation	250mg/L
	Filtration Aid	
Cat-Floc 4900	Coagulation & Flocculation	180 mg/L
Cat-Floc KP45401	Coagulation & Flocculation	250mg/L
	Filtration Aid	
Cat-Floc KP45402	Coagulation & Flocculation	180mg/L

Nalco 8158	Coagulation & Flocculation Filtration Aid	250mg/L
SD46058	Coagulation & Flocculation Filtration Aid	250mg/L
Ultrion® 8187	Coagulation & Flocculation	180mg/L

[AL] Based on an evaluation of health effects data, the level of aluminum in the finished drinking water should not exceed 2 mg/L.

Polymer Blends[AL] [PD] [PY]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
71254	Coagulation & Flocculation	176 mg/L
71950	Coagulation & Flocculation	176 mg/L
Cat-Floc 2953	Coagulation & Flocculation	189 mg/L
Cat-Floc 4954	Coagulation & Flocculation	100 mg/L
Cat-Floc 71264	Coagulation & Flocculation	176 mg/L
Cat-Floc 8964	Coagulation & Flocculation	176 mg/L
Cat-Floc KL-10	Coagulation & Flocculation	125mg/L
Cat-Floc KP45501	Coagulation & Flocculation	125mg/L
Cat-Floc KP45504	Coagulation & Flocculation	66mg/L
Cat-Floc KP45551	Coagulation & Flocculation	150mg/L
Cat-Floc KP45552	Coagulation & Flocculation	176mg/L
E-8964	Coagulation & Flocculation	176 mg/L
Ferralyte 8130	Coagulation & Flocculation	150mg/L
PermaFloc™ PC-603	Coagulation & Flocculation	150mg/L
SD46108	Coagulation & Flocculation	66mg/L
SD46121	Coagulation & Flocculation	125mg/L
SD46122	Coagulation & Flocculation	176mg/L
Ultrion® 8186	Coagulation & Flocculation	66mg/L

[AL] Based on an evaluation of health effects data, the level of aluminum in the finished drinking water should not exceed 2 mg/L.

[PD] Certification is based on a maximum carryover of 50 ug/L DADMAC polymer.

[PY] Polyamines Certified by NSF International comply with 40 CFR 141.111 requirements : percent monomer and dose.

Sodium Polyphosphates, Glassy

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
AC-71Z International	Corrosion & Scale Control Sequestering	11 mg/L
Calgon 73191	Corrosion & Scale Control Sequestering	11 mg/L
Calgon 73191 Regular	Corrosion & Scale Control Sequestering	11 mg/L
Calgon 73193 Unadjusted Glass	Corrosion & Scale Control Sequestering	11 mg/L
Calgon 73194 Crushed	Corrosion & Scale Control	11 mg/L
Calgon Composition Comp R	Corrosion & Scale Control	11 mg/L
CorrGon P45805	Corrosion & Scale Control Sequestering	11mg/L
MSW-600	Corrosion & Scale Control	11 mg/L

Polyphosphates-sodium hexametaphosphates SD46128	Sequestering	
	Corrosion & Scale Control	11mg/L
	Sequestering	
	Corrosion & Scale Control	11mg/L
	Sequestering	
	Corrosion & Scale Control	11mg/L
Tetrapotassium Pyrophosphate		
<i>Trade Designation</i>		
C-2	<i>Product Function</i>	<i>Max Use</i>
Corrgon P45806	Corrosion & Scale Control	29 mg/L
	Sequestering	
MSW-105	Corrosion & Scale Control	42mg/L
	Sequestering	
	Corrosion & Scale Control	29 mg/L
	Sequestering	
Zinc Chloride[ZN]		
<i>Trade Designation</i>		
Nalco 7384	<i>Product Function</i>	<i>Max Use</i>
	Corrosion & Scale Control	6mg/L

[ZN] Based on an evaluation of health effects data, the level of zinc in the finished drinking water should not exceed 2.0 mg/L.

Zinc Orthophosphate[ZN]		
<i>Trade Designation</i>		
C-101	<i>Product Function</i>	<i>Max Use</i>
C-11	Corrosion & Scale Control	23 mg/L
	Sequestering	
C-14	Corrosion & Scale Control	26 mg/L
	Sequestering	
C-9	Corrosion & Scale Control	31 mg/L
	Sequestering	
C-9L Corrosion Inhibitor	Corrosion & Scale Control	15 mg/L
	Sequestering	
CL-9700 Corrosion Inhibitor	Corrosion & Scale Control	26 mg/L
	Sequestering	
CorrGon P45801	Corrosion & Scale Control	15 mg/L
	Sequestering	
MSW-109	Corrosion & Scale Control	15mg/L
	Sequestering	
RC-122	Corrosion & Scale Control	15 mg/L
	Sequestering	
SD46123	Corrosion & Scale Control	15 mg/L
	Sequestering	
SD46126	Corrosion & Scale Control	15mg/L
	Sequestering	
	Corrosion & Scale Control	26mg/L
	Sequestering	

[ZN] Based on an evaluation of health effects data, the level of zinc in the finished drinking water should not exceed 2.0 mg/L.

Facility : #150 CANADA**Ferric Sulfate**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Cat-Floc KP45451	Coagulation & Flocculation	300mg/L
Ferralyte 8131	Coagulation & Flocculation	300 mg/L
PermaFloc™ PC-607	Coagulation & Flocculation	300mg/L

Miscellaneous Water Supply Products

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
EL-5600	Reverse Osmosis Antiscalant	7mg/L
PermaClean® PC-87[1]	Reverse Osmosis Antiscalant	NA
PermaTreat® PC-1850	Reverse Osmosis Antiscalant	7mg/L
RC-956	Reverse Osmosis Antiscalant	7mg/L
SD46044	Reverse Osmosis Antiscalant	7mg/L

[1] These products are designed to be used off-line and flushed out prior to using the system for drinking water, following manufacturer's use instructions.

Poly (Diallyldimethylammonium Chloride)(pDADMAC)[PD]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Nalcolyte 8103	Coagulation & Flocculation	41.6 mg/L
Nalcolyte 8793	Coagulation & Flocculation	41.6 mg/L

[PD] Certification is based on a maximum carryover of 50 ug/L DADMAC polymer.

Polyacrylamide[PC]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Nalclear 7766 Plus	Coagulation & Flocculation	1 mg/L
Nalclear 7768	Coagulation & Flocculation	1 mg/L
Nalclear 8173 PULV	Coagulation & Flocculation	1 mg/L
Nalclear 8181	Coagulation & Flocculation	1 mg/L
Nalclear 8182	Coagulation & Flocculation	.9mg/L
Nalclear 8184	Coagulation & Flocculation	1 mg/L
	Filtration Aid	
Nalclear 8472	Coagulation & Flocculation	.9 mg/L
Nalclear 8478	Coagulation & Flocculation	1 mg/L
Nalclear 8771	Coagulation & Flocculation	1 mg/L
	Filtration Aid	
Nalclear 8772	Coagulation & Flocculation	1 mg/L
Nalclear 8774	Coagulation & Flocculation	1 mg/L
Nalco 1C34	Coagulation & Flocculation	1 mg/L
Optimer 7190 Plus	Coagulation & Flocculation	1 mg/L
Optimer 8170 PULV	Coagulation & Flocculation	1 mg/L
PermaFloc™ PC-707	Coagulation & Flocculation	1mg/L
Prosedim AEP45001	Coagulation & Flocculation	1mg/L
Prosedim AEP45101	Coagulation & Flocculation	1mg/L
Prosedim AEP45103	Coagulation & Flocculation	.9mg/L
Prosedim AEP45104	Coagulation & Flocculation	1mg/L

Prosedim AEP45105	Coagulation & Flocculation Filtration Aid	1mg/L
Prosedim AEP45151	Coagulation & Flocculation	1mg/L
Prosedim AEP45153	Coagulation & Flocculation	1mg/L
SD46110	Coagulation & Flocculation	1mg/L
SD46111	Coagulation & Flocculation	1mg/L
SD46112	Coagulation & Flocculation	1mg/L
SD46113	Coagulation & Flocculation Filtration Aid	1mg/L
SD46140	Coagulation & Flocculation	.9mg/L
SD46147	Coagulation & Flocculation	1mg/L

[PC] Polyacrylamide Products Certified by NSF International comply with 40 CFR 141.111 requirements for percent monomer and dose.

Polyaluminum Chloride[AL]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Aluminex-1	Coagulation & Flocculation Filtration Aid	250 mg/L
Cat-Floc KP45401	Coagulation & Flocculation Filtration Aid	250mg/L
Nalco 8158	Coagulation & Flocculation Filtration Aid	250 mg/L
SD46058	Coagulation & Flocculation Filtration Aid	250mg/L

[AL] Based on an evaluation of health effects data, the level of aluminum in the finished drinking water should not exceed 2 mg/L.

Polyamines[PY]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Cat-Floc KP45351	Coagulation & Flocculation	20mg/L
Cat-Floc KP45352	Coagulation & Flocculation	20mg/L
Nalclear 8790	Coagulation & Flocculation	20mg/L
Nalcolyte 8100	Coagulation & Flocculation	20 mg/L
Nalcolyte 8105	Coagulation & Flocculation	20mg/L
Nalcolyte 8790	Coagulation & Flocculation	20 mg/L
Nalcolyte 8795	Coagulation & Flocculation	20 mg/L
PermaFloc™ PC-407	Coagulation & Flocculation	20mg/L
SD46100	Coagulation & Flocculation	20mg/L
SD46131	Coagulation & Flocculation	20mg/L

[PY] Polyamines Certified by NSF International comply with 40 CFR 141.111 requirements : percent monomer and dose.

Polymer Blends[AL] [PD] [PY]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Aluminex-2	Coagulation & Flocculation	167 mg/L
Aluminex-3	Coagulation & Flocculation	191 mg/L
Aluminex-4	Coagulation & Flocculation Filtration Aid	150 mg/L

Cat-Floc KP45504	Coagulation & Flocculation	66mg/L
Cat-Floc KP45508	Coagulation & Flocculation	40mg/L
Cat-Floc KP45551	Coagulation & Flocculation	150mg/L
Ferralyte 8130	Coagulation & Flocculation	150 mg/L
PermaFloc™ PC-603	Coagulation & Flocculation	150mg/L
SD46108	Coagulation & Flocculation	66mg/L
SD46109	Coagulation & Flocculation	40mg/L
Ultrion 8185	Coagulation & Flocculation	40 mg/L
Ultrion 8186	Coagulation & Flocculation	66 mg/L

[AL] Based on an evaluation of health effects data, the level of aluminum in the finished drinking water should not exceed 2 mg/L.

[PD] Certification is based on a maximum carryover of 50 ug/L DADMAC polymer.

[PY] Polyamines Certified by NSF International comply with 40 CFR 141.111 requirements : percent monomer and dose.

Sodium Aluminate[AL]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Cat-Floc KP45403	Coagulation & Flocculation	100mg/L
Nalco 2	Coagulation & Flocculation	100 mg/L
Nalco 8750	Coagulation & Flocculation	100 mg/L
SD46132	Coagulation & Flocculation	100mg/L

[AL] Based on an evaluation of health effects data, the level of aluminum in the finished drinking water should not exceed 2 mg/L.

Facility : #175 CANADA

Polymer Blends[AL] [PD] [PY]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Aluminex 7	Coagulation & Flocculation	217mg/L
Aluminex 6	Coagulation & Flocculation	133mg/L

[AL] Based on an evaluation of health effects data, the level of aluminum in the finished drinking water should not exceed 2 mg/L.

[PD] Certification is based on a maximum carryover of 50 ug/L DADMAC polymer.

[PY] Polyamines Certified by NSF International comply with 40 CFR 141.111 requirements : percent monomer and dose.

Facility : #669 USA

Polymer Blends[AL]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Ultrion SVC 7002	Coagulation & Flocculation	156 mg/L
Ultrion SVC 7014	Coagulation & Flocculation	156 mg/L
Ultrion SVC 7018	Coagulation & Flocculation	156 mg/L

[AL] Based on an evaluation of health effects data, the level of aluminum in the finished drinking water should not exceed 2 mg/L.

Facility : #681 USA**Miscellaneous Water Supply Products**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
WaterSavr™ 45901[1]	Other	.3mg/L
WaterSavr™ 45902AG[1]	Other	.3mg/L

[1] This product is designed for the treatment of surface water before it enters the water treatment plant.

Facility : #685 USA**Miscellaneous Water Supply Products**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
WaterSavr™ 45901[1]	Other	.3mg/L
WaterSavr™ 45902AG[1]	Other	.3mg/L

[1] This product is designed for the treatment of surface water before it enters the water treatment plant.

Facility : SUZANO, BRAZIL**Miscellaneous Water Supply Products**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
PermaClean® PC-33[1] [2]	Membrane Cleaner	NA
PermaClean® PC-67[1]	Reverse Osmosis Antiscalant Membrane Cleaner	NA
PermaClean® PC-77[1]	Membrane Cleaner	NA
PermaTreat® PC-191	Reverse Osmosis Antiscalant	5mg/L
PermaTreat® PC-191T	Reverse Osmosis Antiscalant	5mg/L
PermaTreat® PC-510	Reverse Osmosis Antiscalant	10mg/L

[1] This product is designed to be used off-line and flushed out prior to using the system for drinking water.

[2] The pH of the influent and effluent water should be monitored to ensure that all traces of the product have been removed before placing into service.

Facility : LATINA, ITALY**Miscellaneous Water Supply Products**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
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PermaTreat® PC-191	Reverse Osmosis Antiscalant	5mg/L
Poly (Diallyldimethylammonium Chloride)(pDADMAC)[PD]		
<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Cat-Floc 8102 Plus	Coagulation & Flocculation	50mg/L
Cat-Floc 8103 Plus	Coagulation & Flocculation	57mg/L
Cat-Floc 8792 Plus	Coagulation & Flocculation	50mg/L
Cat-Floc 8793 Plus	Coagulation & Flocculation	57mg/L
Cat-Floc 8799 Plus	Coagulation & Flocculation	25mg/L
Cat-Floc CFC	Coagulation & Flocculation	25mg/L
Cat-Floc CFCL	Coagulation & Flocculation	25mg/L
Cat-Floc CFT	Coagulation & Flocculation	50mg/L
Cat-Floc CFTL	Coagulation & Flocculation	50mg/L
Cat-Floc CL	Coagulation & Flocculation	25mg/L
Cat-Floc CL-M	Coagulation & Flocculation	25mg/L
Cat-Floc DL	Coagulation & Flocculation	57mg/L
Cat-Floc KP45304	Coagulation & Flocculation	57mg/L
Cat-Floc KP45305	Coagulation & Flocculation	25mg/L
Cat-Floc KP45306	Coagulation & Flocculation	50mg/L
Cat-Floc KP45401	Coagulation & Flocculation	57mg/L
Cat-Floc TL	Coagulation & Flocculation	50mg/L
E-905	Molluscicide	
PermaFloc PC-306	Coagulation & Flocculation	50mg/L
SD46104	Coagulation & Flocculation	57mg/L
SD46105	Coagulation & Flocculation	57mg/L
SD46106	Coagulation & Flocculation	25mg/L
SD46160	Coagulation & Flocculation	50mg/L
VeliGON CL-M	Coagulation & Flocculation	25mg/L
	Coagulation & Flocculation	25mg/L
	Molluscicide	
VeliGON DL-M	Coagulation & Flocculation	57mg/L
	Molluscicide	
VeliGON TL-M	Coagulation & Flocculation	50mg/L
	Molluscicide	

[PD] Certification is based on a maximum carryover of 50 ug/L DADMAC polymer.

Number of matching Manufacturers is 1
 Number of matching Products is 641
 Processing time was 0 seconds

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ADDENDUM #1/FORMAL QUOTATION NO.: Q-040024
LEE COUNTY, FLORIDA
PROPOSAL QUOTE FORM
FOR THE ANNUAL PURCHASE OF
CHEMICALS FOR UTILITIES

ATTACHMENT 4

DATE SUBMITTED: 12-12-03

VENDOR NAME: HARCROS CHEMICALS INC

TO: The Board of County Commissioners
Lee County
Fort Myers, Florida

Having carefully examined the "General Conditions", and the "Detailed Specifications", all of which are contained herein, the Undersigned proposes to furnish the following which meet these specifications:

The undersigned acknowledges receipt of Addenda numbers: Q040024 A 12-3-03

GRAND TOTAL (ALL SECTIONS): \$ _____

WILL YOU DELIVER WITH YOUR OWN VEHICLE AS OPPOSED TO COMMON CARRIER?

YES When possible NO _____

SECTION 1, ANHYDROUS AMMONIA

Specify product name: _____

\$ _____ EA. X 60.6 tons = Total Cost \$ N-B

SECTION 1A, ANHYDROUS AMMONIA

Specify product name: _____

\$ _____ EA. X 4 (150# cylinders) = Total Cost \$ N-B

MINIMUM ORDER QUANTITY: _____

SECTION 2, ANIONIC POLYMERS

Specify product name: _____

\$ _____ EA. X 24,000 lbs = Total Cost \$ N-B

Manufacturer _____ PolyFloc AP 1100P, or equal

MINIMUM ORDER QUANTITY: _____

SECTION 3, AQUA AMMONIA 18%

Specify product name: _____

\$ _____ EA. X 8,000 gallons = Total Cost \$ N-B

Manufacturer _____

MINIMUM ORDER QUANTITY: _____

SECTION 4, BENTONITE CLAY ACCUFLOC SDG

Specify product name: _____

\$ _____ EA. X 500 lbs = Total Cost \$ N-B

MINIMUM ORDER QUANTITY: _____

SECTION 5, CALCIUM HYPOCHLORITE 3 inch stabilized tablets

Specify product name: PPA ACUTABS

\$1.79# EA. X 24 (100# pails) = Total Cost \$ 4,296.00
\$179.00 ea

MINIMUM ORDER QUANTITY: 6 pails

SECTION 6, CITRIC ACID

Specify product name: HAACROS LABEL M&D

\$.69# EA. X 500 lbs = Total Cost \$ 845.00

MINIMUM ORDER QUANTITY: 500#



SECTION 7, HYDRATED LIME

Specify product name: _____

\$ _____ EA. X 6,480 (50# bags) = Total Cost \$ N-B

MINIMUM ORDER QUANTITY: _____

SECTION 8, HYDROCHLORIC ACID 31% (muriatic acid)

Specify product name: HARCROS LABEL

\$ 1.05 gal EA. X 4,800 gallons (275 gal. totes) = Total Cost \$ 5,040

Manufacturer Vulcan/Reagent

SECTION 8A, HYDROCHLORIC ACID 31% (muriatic acid)

Specify product name: HARCROS LABEL

\$ 1.75 gal EA. X 420 gallons (15 gal. carboys) = Total Cost \$ \$735.00

Manufacturer Vulcan/Reagent

MINIMUM QTY Shipment 14 x 15 gal

SECTION 8B, HYDROCHLORIC ACID 31% (muriatic acid)

Specify product name: HARCROS LABEL

\$ 1.75 EA. X 244 gallons (1 gal. jugs) = Total Cost \$ 427.00

Manufacturer Vulcan/Reagent

MINIMUM ORDER QUANTITY: 120 gal (30 case of 4x1 gal)

SECTION 9, HYDROFLUOSILIC ACID 23%

Specify product name: FLUOSILIC ACID 23%

\$165.00 EA. X ^{TON} 13,000 gallons = Total Cost \$ _____
Delivered Basis

Specify product name: HARCROS LABEL/MSAA

MINIMUM ORDER QUANTITY: 45,000#

SECTION 9A, HYDROFLUOSILIC ACID 23%

Specify product name: FLUOSILICIC 23% ACID

(1.85 gal) \$ 275 EA. X 15 (275 gal. Totes) = Total Cost \$ 7,631.25

Specify product name: L.I. MFRGR

SECTION 10, POLYMER (LIQUID)

Specify product name: _____

\$ _____ EA. X 2,000 lbs = Total Cost \$ N-B

MINIMUM ORDER QUANTITY: _____

SECTION 11, POTASSIUM PERMANGANATE

Specify product name: CARUS FREETLO

\$ 185# EA. X 2,000 lbs = Total Cost \$ 3,700.00

MINIMUM ORDER QUANTITY: 10 X 55# drums

SECTION 12, PYRO-PHOSPHATE

Specify product name: _____

\$ _____ EA. X 18,000 lbs = Total Cost \$ N-B

MINIMUM ORDER QUANTITY: _____

SECTION 13, SODA ASH

Specify product name: FMC - SODA ASH light

\$ 10.50 EA. X 98 (50# bags) = Total Cost \$ 1029.00

MINIMUM ORDER QUANTITY: 48 bags

SECTION 13A, SODA ASH

Specify product name: _____

\$ _____ EA. X 200 tons = Total Cost \$ N.B

MINIMUM ORDER QUANTITY: _____

SECTION 14, SODIUM HYPOCHLORITE SOLUTION

Specify product name: HARCROS LABEL MSBS

\$ 408 EA. X 450,000 gallons = Total Cost \$ 183,600.

MINIMUM ORDER QUANTITY: 4000 gals

SECTION 14A, SODIUM HYPOCHLORITE SOLUTION

Specify product name: HARCROS LABEL MSAS

\$ 54.50/drum EA. X 20 (55 gal. drums) = Total Cost \$ 1090.00

MINIMUM ORDER QUANTITY: 4 drums @ 54.50 ea drum

SECTION 15, SODIUM METABISULFITE

Specify product name: HARCROS LABEL MSAS

\$ 18.80 EA. X 500 (50# bags) = Total Cost \$ 9,400

MINIMUM ORDER QUANTITY: 48 BAGS

SECTION 16, ZINC ORTHO- PHOSPHATE

Specify product name: _____

\$ _____ EA. X 49,000 lbs = Total Cost \$ N-B

MINIMUM ORDER QUANTITY: _____

TO BE STARTED WITHIN 5-7 days CALENDAR DAYS AFTER RECEIPT OF AWARD AND PURCHASE ORDER.

Is your firm interested in being considered for the Local Vendor Preference?

Yes _____ No _____

If yes, then read the paragraph entitled "Local Vendor Preference" included in these specifications. Also complete the Local Vendor Preference Questionnaire and return with your quotation.

Quoters should carefully read all the terms and conditions of the specifications. Any representation of deviation or modification to the quote may be grounds to reject the quote.

Are there any modifications to the quote or specifications:

Yes Noted No _____

Failure to clearly identify any modifications in the space below or on a separate page may be grounds for the quoter being declared nonresponsive or to have the award of the quote rescinded by the County.

MODIFICATIONS:

Section #6 IMPORTED CITRIC ACID - Non ANWA (FCC Grade)

Section #14 - CAN NOT GUARANTEE CUSTOMERS will give ACCESS to SITE
CAN NOT SUPPLY Certified Test with INDIVIDUAL TEST BATCHES

Section #14 All Bleach Meets N.S.F. CERTIFICATION

Sections 1-16 All ITEMS QUOTED Meets NSF LISTING AS QUOTED

Quoter shall submit his/her quote on the County's Proposal Quote Form, including the firm name and authorized signature. Any blank spaces on the Proposal Quote Form, qualifying notes or exceptions, counter offers, lack of required submittals, or signatures, on County's Form may result in the Quoter/Quote being declared non-responsive by the County.

ANTI-COLLUSION STATEMENT

THE BELOW SIGNED QUOTER HAS NOT DIVULGED TO, DISCUSSED OR COMPARED HIS QUOTE WITH OTHER QUOTERS AND HAS NOT COLLUDED WITH ANY OTHER QUOTER OR PARTIES TO A QUOTE WHATSOEVER. NOTE: NO PREMIUMS, REBATES OR GRATUITIES TO ANY EMPLOYEE OR AGENT ARE PERMITTED EITHER WITH, PRIOR TO, OR AFTER ANY DELIVERY OF MATERIALS. ANY SUCH VIOLATION WILL RESULT IN THE CANCELLATION AND/OR RETURN OF MATERIAL (AS APPLICABLE) AND THE REMOVAL FROM THE MASTER BIDDERS LIST.

FIRM NAME HARCROS CHEMICALS INC

BY (Printed): THOMAS HILLYER

BY (Signature): Thomas Hillyer

TITLE: District Manager

FEDERAL ID # OR S.S.# _____

ADDRESS: 5132 TRENTON ST.
TAMPA FL 33619

PHONE NO.: 813 247-4532

FAX NO.: 813 247-7917

CELLULAR PHONE/PAGER NO.: 813 748-9029

LEE COUNTY OCCUPATIONAL LICENSE NUMBER: N-A

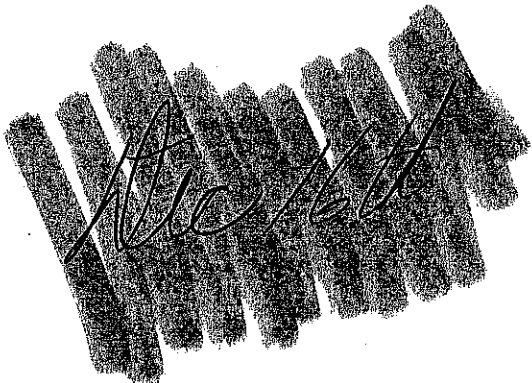
E-MAIL ADDRESS: _____

REVISED: 7/28/00

~~813~~ 813 SUR
748-9037



LEE COUNTY
SOUTHWEST FLORIDA



PROJECT NO.: Q-040024

OPEN DATE: December 16, 2003

AND TIME: 2:30 P.M.

PRE-BID DATE: December 3, 2003

AND TIME: 10:00 a.m.

LOCATION: Lee County Purchasing
1825 Hendry Street, 3rd Floor,
Ft. Myers, FL 33901

REQUEST FOR QUOTATIONS

TITLE:

CHEMICALS FOR UTILITIES

REQUESTER: LEE COUNTY BOARD OF COUNTY COMMISSIONERS
DIVISION OF PURCHASING

MAILING ADDRESS

P.O. BOX 398
FORT MYERS, FL 33902-0398

PHYSICAL ADDRESS

1825 HENDRY STREET, 3RD FLOOR
FORT MYERS, FL 33901

BUYER: CHEVONE PETERSON
PHONE NO.: (239) 344-5450

GENERAL CONDITIONS

Sealed Quotations will be received by the DIVISION OF PURCHASING, until 2:30pm on the date specified on the cover sheet of this "Request for Quotations", and opened immediately thereafter by the Purchasing Director or designee.

Any question regarding this solicitation should be directed to the Buyer listed on the cover page of this solicitation, or by calling the Division of Purchasing at (239) 689-7385.

1. **SUBMISSION OF QUOTE:**

a. Quotations shall be sealed in an envelope, and the outside of the envelope should be marked with the following information:

1. Marked with the words "Sealed Quote"
2. Name of the firm submitting the quotation
3. Title of the quotation
4. Quotation number

b. The Quotation shall be submitted in triplicate as follows:

3 Copies

1. The original consisting of the Lee County quotes forms completed and signed.
2. A copy of the original quote forms for the Purchasing Director.
3. A second copy of the original quote forms for use by the requesting department.

c. The following should be submitted along with the quotation in a separate envelope. This envelope should be marked as described above, but instead of marking the envelope as "Sealed Quote", please indicate the contents; i.e., literature, drawings, submittals, etc. This information should be submitted in duplicate.

2 Copies

1. Any information (either required or in addition to that asked for by the specifications) necessary to analyze your quotation; i.e., required submittals, literature, technical data, financial statements.
2. Warranties and guarantees against defective materials and workmanship.

d. **ALTERNATE QUOTE:** If the vendor elects to submit more than one quote, then the quotes should be submitted in separate envelopes and marked as indicated above. The second, or alternate quote should be marked as "Alternate".

In accordance with Chapter 443 of the Florida Statutes, it is the vendor's responsibility to provide Lee County with Materials Safety Data Sheets on quoted materials, as may apply to this procurement.

14. **MISCELLANEOUS**

If a conflict exists between the General Conditions and the detailed specifications, then the detailed specifications shall prevail.

15. **WAIVER OF CLAIMS**

Once this contract expires, or final payment has been requested and made, the awarded contractor shall have no more than 30 days to present or file any claims against the County concerning this contract. After that period, the County will consider the Contractor to have waived any right to claims against the County concerning this agreement.

16. **AUTHORITY TO PIGGYBACK**

It is hereby made a precondition of any quote and a part of these specifications that the submission of any quote in response to this request constitutes a quote made under the same conditions, for the same price, and for the same effective period as this quote, to any other governmental entity. *in Lee County*

17. **COUNTY RESERVES THE RIGHT**

a) **State Contract**

If applicable, the County reserves the right to purchase any of the items in this quote from State Contract Vendors if the prices are deemed lower on State Contract than the prices we receive in this quotation.

b) **Any Single Large Project**

The County, in its sole discretion, reserves the right to separately quote any project that is outside the scope of this quote, whether through size, complexity, or dollar value.

c) **Disadvantaged Business Enterprises**

The County, in its sole discretion, reserves the right to purchase any of the items in this quote from Disadvantage Business Enterprise vendor if the prices are determined to be in the best interest of the County, to assist the County in the fulfillment of any of the County's grant commitments to federal or state agencies.

ADDENDUM #1/FORMAL QUOTATION NO.: Q-040024
LEE COUNTY PURCHASING - BIDDERS CHECK LIST

IMPORTANT: Please read carefully and return with your bid proposal.
Please check off each of the following items as the necessary action is completed:

- 1. The Quote has been signed.
- 2. The Quote prices offered have been reviewed.
- 3. The price extensions and totals have been checked.
- 4. The original (must be manually signed) and 2 copies of the quote have been submitted.
- 5. Three (3) identical sets of descriptive literature, brochures and/or data (if required) have been submitted under separate cover.
- 6. All modifications have been acknowledged in the space provided.
- 7. All addendums issued, if any, have been acknowledged in the space provided.
- 8. Erasures or other changes made to the quote document have been initialed by the person signing the quote.
- 9. Bid Bond and/or certified Check, (if required) have been submitted with the quote in amounts indicated.
- 10. Any Delivery information required is included.
- 11. The mailing envelope has been addressed to:

MAILING ADDRESS	or	PHYSICAL ADDRESS
Lee County Purchasing		Lee County Purchasing
P.O. Box 398		1825 HENDRY STREET, 3 RD FLOOR
Ft. Myers, FL 33902-0398		Ft. Myers, FL 33901
- 12. The mailing envelope **MUST** be sealed and marked with:
Quote Number _____
Opening Date and/or Receiving Date _____
- 13. The quote will be mailed or delivered in time to be received no later than the specified opening date and time. (Otherwise quote cannot be considered or accepted.)
- 14. If submitting a "NO BID" please write quote number here _____
and check one of the following:
 Do not offer this product Insufficient time to respond.
 Unable to meet specifications (why)
 Unable to meet bond or insurance requirement.
Other: _____

Company Name and Address:
HARCAOS CHEMICALS INC
TAMPA FLORIDA

ADDENDUM #1/FORMAL QUOTATION NO.: Q-040024
ATTACHMENT A
LOCAL VENDOR PREFERENCE QUESTIONNAIRE
(LEE COUNTY ORDINANCE NO. 00-10)

Instructions: Please complete either Part A or B whichever is applicable to your firm

PART A: VENDOR'S PRINCIPAL PLACE OF BUSINESS IS LOCATED WITHIN
LEE COUNTY (Only complete Part A if your principal place of business is
located within the boundaries of Lee County)

1. What is the physical location of your principal place of business that is
located within the boundaries of Lee County, Florida?

2. What is the size of this facility (i.e. sales area size, warehouse, storage yard, etc.)

PART B: VENDOR'S PRINCIPAL PLACE OF BUSINESS IS NOT LOCATED
WITHIN LEE COUNTY OR DOES NOT HAVE A PHYSICAL
LOCATION WITHIN LEE COUNTY (Please complete this section.)

1. How many employees are available to service this contract? 15+

2. Describe the types and amount of equipment you have available to service
this contract.

3+ BULK Bleach TANKERS FOR Full or PARTIAL Delivery
② BOX & TRAILER TRUCK FOR PALLETS & DRUM Delivery
100+ BOX & TRILER COMMON CARRIER DRUM & Pallet Product

3. Describe the types and amount of material stock that you have available to service
this contract.

ON HAND - ONSITE AT HARCROS TAMPA 120% of
MINIMUM Delivery of All QUOTED ITEM per Delivery
AT ALL TIMES

4. Have you provided goods or services to Lee County on a regular basis for the preceding, consecutive five years?

Yes _____ No _____

If yes, please provide your contractual history with Lee County for the past five, consecutive years. Attach additional pages if necessary.

Both Lee County + Municipal Contracts over
past 25 yrs.
TON CHLORINE
CAUSTIC SODA
POTASSIUM PERMANGANATE

ADDENDUM #1/FORMAL QUOTATION NO.: Q-040024
ATTACHMENT A
LOCAL VENDOR PREFERENCE QUESTIONNAIRE
(LEE COUNTY ORDINANCE NO. 00-10)

Instructions: Please complete either Part A or B whichever is applicable to your firm

PART A: VENDOR'S PRINCIPAL PLACE OF BUSINESS IS LOCATED WITHIN LEE COUNTY (Only complete Part A if your principal place of business is located within the boundaries of Lee County)

1. **What is the physical location of your principal place of business that is located within the boundaries of Lee County, Florida?**

2. **What is the size of this facility (i.e. sales area size, warehouse, storage yard, etc.)**

PART B: VENDOR'S PRINCIPAL PLACE OF BUSINESS IS NOT LOCATED WITHIN LEE COUNTY OR DOES NOT HAVE A PHYSICAL LOCATION WITHIN LEE COUNTY (Please complete this section.)

1. **How many employees are available to service this contract?** 287

2. **Describe the types and amount of equipment you have available to service this contract.**

68 tankers, 40 flatbeds and 67 tractors

3. **Describe the types and amount of material stock that you have available to service this contract.**

3 Florida shipping locations. Largest bleach manufacturer and chlorine re-packager in the southeastern U.S.

4. Have you provided goods or services to Lee County on a regular basis for the preceding, consecutive five years?

Yes _____

No _____

If yes, please provide your contractual history with Lee County for the past five, consecutive years. Attach additional pages if necessary.

Our records only go back 3 years, of which we have provided
wastewater treatment chemicals to Lee County.

HARCROS CHEMICALS, INC.
5132 TRENTON STREET
TAMPA, FL 33819
813-247-4531
Fax 813-247-7917

**HARCROS
CHEMICALS, INC.**

Fax

To: Chevonne Peterson	From: SUE ERNEST
Fax: 239-344-5460	Pages: 11
Phone: 239-344-5450	Date: 1/6/2004
Re: Specifications	E mail: semest@harcroschem.com
Urgent <input checked="" type="checkbox"/> For Review <input type="checkbox"/> Please Comment <input type="checkbox"/> Please Reply <input type="checkbox"/> Please Recycle	

Chevonne,

Here are the submittals per your request. The MSDS' and the Bleach Spec will be put in today's mail.

Let me know if I have forgotten anything. Tom said that we have not had any incidents in 5 years, so I hope he responded to you.

Thanks

Sue



Technical data

FMC Grade 100™

Light Density Soda Ash

CAS No. 497-19-8

Chemical Name	Sodium Carbonate, anhydrous
CAS Name	Disodium carbonate
Formula	Na ₂ CO ₃
Molecular Weight	105.99

Physical Properties		Typical	Specification
Absorptivity, wt %		19	18 min
Bulk Density:	lb/ft ³	48	44 - 54
	g/cm ³	0.77	0.70 - 0.86
Screen analysis, cumulative wt %			
On	US 30 (600 μm)	1	
	US 40 (425 μm)	8	15 max
	US 100 (150 μm)	88	
Thru	US 200 (75 μm)	2	7 max

Chemical Properties		Typical	Specification
Na ₂ O, wt %		58.4	58.0 min
Na ₂ CO ₃ , wt %		99.8	99.2 min
Na ₂ SO ₄ , wt %		0.04	0.10 max
NaCl, wt %		0.03	0.10 max
Fe ₂ O ₃ , ppm		7	20 max
Arsenic, ppm			3 max
Heavy metals as Pb, ppm			10 max
Water insolubles, wt %		0.01	0.05 max

General Properties		
Description		white granular solid
Melting point, °C (°F)		851 (1564)
Solubility, max % @ 35.4°C		33.2
pH, 1% solution @ 25°C		11.4

Standard Containers	50 lb (22.7 kg) bags one ton super sacks Bulk hopper cars and trucks
----------------------------	----------------------------------------------------------------------------

The information contained herein is, to our knowledge, true and accurate. Because conditions of use are beyond our control, we make no warranty or representation, expressed or implied, except that the products discussed herein conform to the chemical descriptions shown on their labels. Nothing contained herein should be construed as permission or recommendation to infringe any patent. No agent, representative, or employee of this company is authorized to vary any of the terms of this notice.

FMC Corporation Alkali Chemicals Division 1735 Market Street Philadelphia Pennsylvania 19103

V2.0 04/2001

CAIROX®

Potassium Permanganate
CAS Registry No. 7722-64-7

Free-Flowing Grade is recommended where potassium permanganate is subjected to high humidity conditions and where the material is to be dry fed through a chemical feeder or stored in a bin or hopper.

Free-Flowing Grade

Assay

Guaranteed 97% KMnO_4

Particle Size

20% maximum retained on #425 U.S. Standard Sieve
(formerly #40)

7% maximum through #75 U.S. Standard Sieve
(formerly #200)

Standards and Specifications

CAIROX® Potassium Permanganate is certified by the National Sanitation Foundation (NSF) to ANSI/NSF Standard 60: Drinking Water Treatment Chemicals - Health Effects.

Technical Grade meets:

AWWA Standard B603

Military Specifications MIL-P-11970-C dated 14 October 1983
Water Chemical Codex RMIC values

Chemical/Physical Data

Formula	KMnO_4
Formula Weight	158.0 g/mol
Form	Granular Crystalline
Specific Gravity	
Solid	2.703 g/cm ³
3% Solution	1.020 g/mL by weight, 20°C/4°C
Bulk Density	Approximately 100 lb/ft ³

Decomposition may start at 150 °C / 302 °F

Solubility in Distilled Water

Temperature		Solubility	
°C	°F	g/L	oz/gal
0	32	27.8	3.7
20	68	65.0	8.6
40	104	125.2	16.7
60	140	230.0	30.7
70	158	286.4	38.3
75	167	323.5	43.2

For more information, refer to the *Solubility Fact Sheet*.

Shipping Containers

25 kg pallet⁽¹⁾ (55.125 lb) net, with handle, made of HDPE, weighs 3.1 lb. It is tapered to allow nested storage of empty drums, stands approximately 15½ inches high and has a maximum diameter of 12 inches.

150 kg drum⁽¹⁾ (330.750 lb) net, made of 22-gauge steel, weighs 22.4 lbs. It stands approximately 29½ inches high and is approximately 19½ inches in diameter.

1500 kg Cycle-Bin™⁽²⁾ (3307 lb) net.

Bulk, up to 48,000 lbs.

Special Packages will be considered on request.

- (1) Meets UN performance oriented packaging requirements.
- (2) The Cycle-Bin™ meets DOT 58 Specifications.

Description

Crystals or granules are dark purple with a metallic sheen, sometimes with a dark bronze-like appearance. Free-Flowing Grade is gray due to an additive. Potassium permanganate has a sweetish, astringent taste and is odorless.

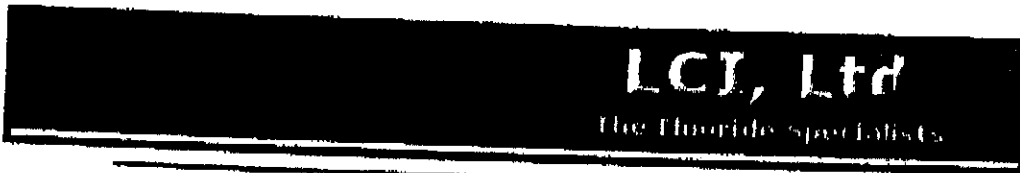
Handling, Storage, and Incompatibility

Protect containers against physical damage. When handling potassium permanganate, respirators should be worn to avoid irritation of or damage to mucous membranes. Eye protection should also be worn when handling potassium permanganate as a solid or in solution.

Potassium permanganate is stable and will keep indefinitely if stored in a cool, dry area in closed containers. Concrete floors are preferred to wooden decks. To clean up spills and leaks, follow the steps recommended in the MSDS. Be sure to use goggles, rubber gloves, and respirator when cleaning up a spill or leak.

Avoid contact with acids, peroxides, and all combustible organic or readily oxidizable materials including inorganic oxidizable materials and metal powders. With hydrochloric acid, chlorine gas is liberated. Potassium permanganate is not combustible, but will support combustion. It may decompose if exposed to intense heat. Fires may be controlled and extinguished by using large quantities of water.

Refer to the MSDS for more information.



Fluorosilicic Acid H_2SiF_6
Hydrofluorosilicic Acid

Product Data Sheet

Chemical Analysis

Typical

Assay (H_2SiF_6)	23.00 % Minimum
Fluorine (F)	18.22 % Minimum
Heavy Metals, as Lead (Pb)	00.02 % Maximum
Hydrofluoric Acid (HF)	Less than 1.00 %

Physical Properties

Description

Water white to straw yellow solution, meeting both the AWWA Standard B703-00 and the ANSI/NSF Standard 60 for Fluorosilicic Acid. Straw yellow shall be determined as material with a maximum of 100 units (APHA) in accordance with method 2120B, visual comparison method.

Color

Specific Gravity

1.234 (H_2O for 25%) @ 60° F

Boiling Point for 25%

222.5° F

Freezing Point for 25%

4° F (-15.5° C)

Molecular Weight

144.08

Weight per Gallon for 25%

10.29 lbs / gal

Viscosity for 23%

6.5 cps

Containers

Bulk Rail Cars

100 tons net weight (approximate)

Bulk Tank Trucks

20 - 25 tons net weight (approximate)

Freight Description

DOT Shipping Classification

Class 8 (Corrosive)

DOT Shipping Name

Fluorosilicic Acid

Corrosive Properties

Potassium permanganate is compatible with many metals and synthetic materials. Natural rubbers and fibers are often incompatible. Solution pH and temperature are also important factors. The material must be compatible with either the acid or alkali also being used.

In neutral and alkaline solutions, potassium permanganate is not corrosive to iron, mild steel, or stainless steel; however, chloride corrosion of metals may be accelerated when an oxidant such as permanganate is present in solution. Plastics such as polypropylene, polyvinyl chloride Type I (PVC I), epoxy resins, fiberglass reinforced plastic (FRP), Penton, Luchte, Viton A, and Hypalon are suitable. Teflon FEP and TFE, and Tefzel ETFE are best. Refer to Material Compatibility Chart.

Aluminum, zinc, copper, lead, and alloys containing these metals may be (slightly) affected by potassium permanganate solutions. Actual studies should be made under the conditions in which permanganate will be used.

Shipping

Potassium permanganate is classified by the Hazardous Materials Transportation Board (HMTB) as an oxidizer. It is shipped under Interstate Commerce Commission's (ICC) Tariff 19.

Proper Shipping Name: Potassium Permanganate (RQ-100/45.4)
Hazard Class: Oxidizer
Identification Number: UN 1490
Label Requirements: Oxidizer
Packaging Requirements: 49 CFR Parts 100 to 199, Sections: 173.152, 173.153, 173.194

Shipping Limitations:

Minimum quantities:

Rail car: See Tariff for destination

Truck: No minimum

Postal regulations:

Information applicable to packaging of oxidizers for shipment by the U.S. Postal Service to domestic and foreign destinations is readily available from the local postmaster.

United Parcel Service accepts 25 lbs as largest unit quantity properly packaged; consult United Parcel Service.

Regulations concerning shipping and packing should be consulted regularly due to frequent changes.

Repacking

When potassium permanganate is repacked, the packing, markings, labels, and shipping conditions must meet applicable Federal regulations. See Code of Federal Regulations-49, Transportation (parts 100-199) and Federal Hazardous Materials Substances Act, 15 U.S.C. 1261.

Applications

Listed below are some of the many applications of potassium permanganate. Permanganate is a powerful oxidizing agent. The optimum condition under which it is to be used can be easily established through technical service evaluations or laboratory testing.

Oxidation and Synthesis - Organic chemicals and intermediates manufacture. Oxidizes impurities in organic and inorganic chemicals.

Water Treatment - Oxidizes iron, manganese, and hydrogen sulfide; controls taste and odor; and is an alternate pre-oxidant for Disinfection By-Product (THMs and HAAs) control.

Municipal Wastewater Treatment - Destroys hydrogen sulfide in wastewater and sludge. Improves sludge dewatering.

Industrial Wastewater Treatment - Oxidizes hydrogen sulfide, phenols, iron, manganese, and many other organic and inorganic contaminants; resultant manganese dioxide aids in removing heavy metals.

Metal Surface Treatment - Conditions mill scale and smut to facilitate subsequent removal by acid pickling in wrought metals manufacturing and jet engine cleaning.

Equipment Cleaning - Assists in cleaning organic and inorganic residues from refining and cooling towers and other processing equipment. Decontaminates hydrogen sulfides, pyrophoric iron sulfides, phenols, and others.

Purification of Gases - Removes trace impurities of sulfur, arsine, phosphine, silane, borane, and sulfides from carbon dioxide and other industrial gases.

Mining and Metallurgical - Aids in separation of molybdenum from copper; removes impurities from zinc and cadmium; oxidizes flotation compounds. Removes iron and manganese from acid mine drainage.

Hazardous Waste Treatment or Remediation - Treats phenols, chlorinated solvents (TCE, PCE), tetraethyl lead, chelated metals, cyanides, and sulfides.

Slag Quenching - Controls hydrogen sulfide and acetylene emissions during quenching of hot slag.

Food Processing - Controls sulfides, soluble animal oil, grease, organic acids, ketones, nitrogen compounds, mercaptans, and BOD.

Carus Chemical Company

315 Fifth Street

P. O. Box 599

Peru, IL 61354

Tel. (815) 223-1500

Fax (815) 224-6697

Web: www.caruschem.com

E-Mail: salesmkt@caruschem.com

CARUS



Responsible Care®
Good Chemistry at Work

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Form #CX 1020

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Packing Group II
DOT/UN Number

Placard: Corrosive
1778

CAS NUMBER: 16961-83-4

Properties

Fluorosilicic Acid is a 20 to 35 percent aqueous solution. It is a colorless to straw yellow, transparent, fuming, corrosive liquid. It has a pungent odor and irritating action on the skin.

Manufacture

Fluorosilicic acid (Hydrofluorosilicic Acid) is manufactured by two different processes, resulting in products with different characteristics. The product can be manufactured from the reaction of Apatite and/or Fluorite (fluorspar) with Sulfuric Acid.

Uses

- > Sterilization of equipment
- > Electroplating
- > Tanning of animal hides
- > Ceramics and glass: Glass etching
- > Commercial Laundry: As a neutralizer for alkalis
- > Hardening of cement
- > Oil well acidizing
- > Rust and stain removal for textiles
- > Wood preservative
- > Water fluoridation

The information presented herein is based on data considered to be accurate and that reflects the requirements of the OSHA Hazard Communication Standards in effect as of the date of preparation of the Product Specification Sheet. However, no warranty or representation, express or implied, is made as to the accuracy or completeness of the foregoing data and safety information. In addition, no responsibility can be assumed by vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices or from any hazards inherent in the nature of the product.

Lucier Chemical Industries 415 Pablo Avenue North Jacksonville Beach, Florida 32250
Telephone 904.241.1200 Fax 904.241.1220

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PRODUCT SPECIFICATION**20° Bé Muriatic Acid**
(HCl)**Technical Grade****COMPONENT****SPECIFICATIONS**

Assay, °Baumé	20.0 min.
Hydrogen Chloride, wt.% as HCl	31.45 min.
Iron, ppm as Fe	3 max.
Heavy Metals as Pb, ppm	1 max.
Arsenic, ppm as As	0.5 max.
Oxidizing Substances, ppm as Cl ₂	10 max.
Color, APHA	30 max.
Extractable Organic Compounds	
Total Organic Compounds (Non-Fluorine-Containing), ppm	5 max.
Fluorinated Organic Compounds, ppm	25 max.

CONTAINERS:

Tank Cars - 20,000 gallon, rubber lined
Tank Trucks - 4,500 and 5,000 gallon, rubber lined

INDUSTRY STANDARDS

Meets requirements of the *Food Chemicals Codex*, Fourth Edition
Meets Federal Specification O-H-765E
Meets requirements of ASTM E 1146-97



Chlor-Alkali & Derivatives
Responsible Care
Good Chemistry at Work



Approval Date: 02/06/1991

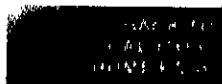
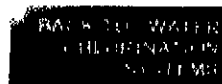
CALCIUM HYPOCHLORITE - QUALITY A CALHA

ITEM	SPECIFICATION
AS IS	
DUST INDEX, MG/100G OF SAMPLE	0.0-25.0
PERCENT BY WEIGHT	
AVAILABLE CHLORINE, CL ₂ WATER, H ₂ O	65.0-71.0 5.5-8.5
ON 10 MESH	0.0-0.5
ON 14 MESH	0.0-15.0
THROUGH 60 MESH	0.0-3.0

PPG Industries, Inc.
One PPG Place, Pittsburgh, Pennsylvania 15272, USA

WATER CHLORINATION SYSTEMS

Treating Drinking Water



The chemical makeup and varied benefits of the Accu-Tab[®] tablet chlorination system provide a remarkable solution for drinking water chlorination. Specifically, PPG has answered the challenge of providing an easy-to-use and safe method of chlorination. Below are some key points about the product and its impact on the water industry:

- Chlorination is recognized and widely accepted as the effective method of disinfecting drinking water. 98% of drinking water is chlorinated.
- Today, many companies and municipalities are looking for alternatives to chlorine gas cylinders and liquid bleach (sodium hypochlorite) due to safety & handling concerns and are choosing PPG calcium hypochlorite as a viable alternative.
- Accu-Tab[®] tablet chlorination systems provide a consistent and accurate method of drinking water chlorination.
- NSF 60 and 61 Listed AWWA - B300

Read the Customer Case Study below for more information on PPG calcium hypochlorite.

PPG Industries: Customer Case Study

Company Profile:

Water district in south eastern U.S.

Provides drinking water to 13,000+ households, or 36,000 people. The district pumps approximately 4.5 million gallons of water a day; peak days average 6.5 million gallons. Total service area relies on 450 miles of pipe to reach 140 square miles.

Situation Analysis:

The water district is a consecutive water system, meaning it purchases its finished water supply primarily from the nearby water system. However, its customer base has continued to expand to the outer limits of its service area, and the chlorine residual has, on occasion, fallen short of the required levels needed to maintain water quality to some outlying areas. As such, it actively sought a system to provide booster chlorination to those outer limits.

Initially, the water district considered three methods of booster chlorination:

- chlorine gas
- liquid bleach
- the PPG calcium hypochlorite system.

When reviewing the methods, the final solution had to meet all three of the water district's criteria:

- ease of operation
- safety
- costs

Both chlorine gas and liquid bleach scored low marks for ease of operation and safety, as far as the water district was concerned. Because both are considered volatile forms of chlorine, the water district believed it would not only put its employees and the public at risk, it would spend more time and money in safety equipment and safety training. The decision to test PPG's calcium hypochlorite chlorinating system was unanimous.

Solution:

The water district and two neighboring water districts just completed a 90-day test of the PPG system -- the first system of its kind to be tested in the state. The test was favorable, and, as such, the water district is recommending the system be approved for use throughout the state.

Overall, the PPG system provided consistent chlorine delivery throughout the area being treated -- even the outer limits they originally sought to reach. Additionally, the PPG system proved to be safe and user-friendly, as well as affordable.

Company Quote:

"We considered chlorine gas, but our concern was safety. Then we looked at liquid bleach and safety was also a concern. When we factored in costs, we decided it would be to our advantage to use the PPG system. In fact, we think the system has great potential for use throughout the entire state."

To learn more read the topics:

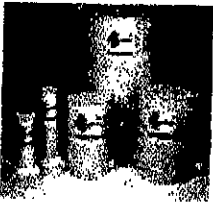
- [Other Process Water](#)
 - [Performance Comparisons](#)
 - [Registrations and Approvals](#)
 - [Equipment](#)
- Or complete our [feedback form](#).

[Product Overview](#) [Accu-Tab™ System](#) [Swimming Pools](#) [Water Chlorination Systems](#) [Product Uses](#) [Ask Joe Pool](#) [Chlor-Alkali](#)

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PPG Industries, Inc.

WATER CHLORINATION SYSTEMS

Accu-Tab® System Registrations and Approvals



- NSF Standard 50 Listed for swimming pools
- NSF Standard 60 and 61 Listed for drinking water
- USDA approved uses: G-4, G-5, G-7, D-2, and Q-4 for Accu-Tab® SI tablets only
- Meets AWWA Standard B-300
- EPA Registration #748-275 and #748-295
- Kosher approved

To learn more read the topics:

- [Treating Drinking Water](#)
- [Other Process Water](#)
- [Performance Comparisons](#)
- [Equipment](#)

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E S S E C O G E N E R A L C H E M I C A L

Product Specifications

CODE: 098-1630
PRODUCT: SODIUM METABISULFITE
TECHNICAL GRADE
EFFECTIVE: 5/5/03

PARAMETERS & SPECIFICATIONS

Sodium Metabisulfite ($\text{Na}_2\text{S}_2\text{O}_5$)
Iron (as Fe)
Sodium Sulfite (as Na_2SO_3)
Appearance

98.0 % Min
7 ppm Max
1.0 % Max

Appearance of Solution

White to slightly yellow crystals, free from significant foreign contamination
Clear to slightly hazy, free from sediment except for a slight flocculence

REMARKS

Analytical Methods: Essec and General Chemical

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E S S E C O G E N E R A L C H E M I C A L

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Harcros Chemicals Inc.

5200 Speaker Road
Kansas City, KS 66106

Telephone : 913/321-3131

Fax : 913/621-7718

E-mail: Dlarsen@harcroschem.com

Date 01/06/04



SODIUM HYPOCHLORITE

SPECIFICATION

<u>Characteristic</u>	<u>Parameters</u>
QUALITY	SPECIFICATION
Available Chlorine (CL)% by weight	10.0-12.5%

The information presented herein under the title specification, while not guaranteed, was prepared by knowledgeable personnel and is true and accurate to the best of our knowledge. No warranty or guarantee, express or implied, is made regarding performance, stability or otherwise. This information is not intended to be all inclusive as the manner and conditions of use, handling, storage and other factors may involve other or additional safety or performance considerations. Please refer to the Material Safety and Data Sheet for safe handling and disposal of this material. It is the responsibility of the end-user to verify the suitability of this product for their use. We do not make any recommendations as to use of this product that will infringe on any existing patents or to violate any Federal, State or Local laws.

REVISION DATE: 06/10/2002
Date Printed January 6, 2004

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 3

PRODUCT NAME : POTASSIUM PERMANGANATE FREEFLO
PRODUCT CODE : 00459

55# DRUM

Date: 5-JAN-2004 14:05:14.09

SECTION IV FIRE & EXPLOSION HAZARD DATA

(CONTINUED)

Flash Point (METHOD) : > OR = N/A
Flammable Limits (% Volume in Air) UPPER: N/D Lower: N/D

HMIS Info	Health	2	NFPA Info	Health	2
Fire	:	0	Fire	:	0
React	:	0	React	:	0
Special	:	X	Special	:	0

EXTINGUISHING MEDIA
flood with water

FIRE FIGHTING PROCEDURES

Prevent human exposure to fire, fumes, smoke, and products of combustion. Evacuate non essential personnel. Firefighters should wear full face, self contained breathing apparatus and impervious protective clothing.

UNUSUAL FIRE & EXPLOSION HAZARDS

Toxic fumes may be released. Product is an oxidizer. It may react vigorously with organics or other materials resulting in an explosion and fire.

SECTION V PHYSICAL DATA

Boiling Point: N/D
Freezing Point: N/D
Specific Gravity (H(2)O=1) : > OR = 2.7000 @ 68 deg. F
Vapor Pressure (MM HG.) : N/D
Vapor Density (AIR=1) : N/D
Evaporation Rate (NA =1) : N/D
Solubility in Water: 6%
Percent Volatile by Volume: N/D
PH: aqueous approx. N/D
Appearance:
SOLID - POWDER, CRYSTAL, FLAKE, GRANULE
TABLET, PRILL, BRIQUETTE, ETC.
Odor :
NIL

SECTION VI REACTIVITY DATA

STABILITY

Stable

INCOMPATIBILITY

inorganic acids metals/metal blends Product is an oxidizer. It may react vigorously with organics or other materials resulting in an explosion and fire. Avoid contact with strong reducing agents which include hydrogen, hydrazine, sulfides, sulfites, and nitrites.

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 4

PRODUCT NAME : POTASSIUM PERMANGANATE FREEFLU
PRODUCT CODE : 00459

55# DRUM

Date: 5-JAN-2004 14:05:14.41

SECTION VI REACTIVITY DATA

(CONTINUED)

HAZARDOUS DECOMPOSITION PRODUCTS
fumes of metal oxides
HAZARDOUS POLYMERIZATION
Will not occur

SECTION VII SPILL AND LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
Sweep, shovel, or pick up and return to dry, clean container. EPA banned the land disposal of D001 ignitable waste oxidizers. These wastes have to be deactivated by reduction (see below). To clear contaminated floors flush with abundant quantities of water into sewer, if permitted by Federal, State, and Local regulations. If not, collect water and treat chemically. (See below). DEACTIVATION OF D001 IGNITABLE WASTE OXIDIZERS BY CHEMICAL REDUCTION; Reduce material in aqueous solution with sodium thiosulfate (Hypo), a bisulfite or ferrous salt solution. The bisulfite or ferrous salt may require some dilute sulfuric acid to promote rapid reduction. Neutralize with sodium bicarbonate to neutral pH if acid was used. Decant or filter and mix formed sludge with into sewer with large quantities of water. Contact Carus Chemical for additional recommendations.
DISPOSAL METHOD
Dispose of material in accordance with all Federal, State and local regulations. Local regulations may be more stringent than Federal or State.

SECTION VIII

Proper Shipping Name: POTASSIUM PERMANGANATE

Hazard Class: 5.1, UN1490, PGII
Label Requirements: OXIDIZER
Reportable Quantity: None

SECTION IX ADDITIONAL INFORMATION

PRECAUTIONS

Wear protective equipment when handling. Use only with adequate ventilation. Wash thoroughly after handling. Do Not breathe dust. Do Not get in eyes, on skin, or clothing. Do not swallow.

HANDLING

Do Not apply heat to container. For manufacturing use only. ATTENTION: This container hazardous when emptied. Since emptied container contains product residues (vapor or liquid), all labeled hazard precautions must be observed.

STORAGE

Keep container closed when not in use. Store in a cool dry place. Keep out of reach of children.

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 2

PRODUCT NAME : POTASSIUM PERMANGANATE FREEFLO
PRODUCT CODE : 00459

55# DRUM

Date: 5-JAN-2004 14:05:13.65

SECTION II HEALTH HAZARDS

(CONTINUED)

INGESTION

Ingestion may cause severe burns gastrointestinal damage

TARGET ORGANS

OVEREXPOSURE MAY CAUSE DAMAGE TO,
DISORDERS OF, OR ADVERSELY AFFECT THE FOLLOWING SYSTEMS, FUNCTIONS, ORGANS: all body tissues
lungs central nervous system

FIRST AID

FIRST AID EYES

Immediately flush eyes with plenty of water for at least 15 minutes, while holding eyelids apart to ensure flushing of entire surface. Call a physician.

FIRST AID SKIN

Immediately flush skin with plenty of water for at least 15 minutes, while removing contaminated clothing and shoes. Thoroughly clean clothing and shoes before reuse. Call a physician.

FIRST AID INHALATION

Remove to fresh air. If not breathing give artificial respiration, preferably mouth to mouth. If breathing is difficult give oxygen. Call a physician.

FIRST AID INGESTION

Do not induce vomiting. Rinse mouth with water. Dilute stomach contents by drinking water. If vomiting occurs spontaneously, keep head below hips to prevent breathing vomit into lungs. Call a physician immediately.

OTHER INFORMATION

ROUTES OF ENTRY

eye contact skin contact inhalation

SECTION III SPECIAL PROTECTION

PROTECTIVE EQUIPMENT

PROTECTIVE EQUIPMENT EYES

chemical goggles faceshield Always wear eye protection when working with chemicals.

PROTECTIVE EQUIPMENT SKIN

impervious gloves clean body covering clothing rubber apron rubber boots

PROTECTIVE EQUIPMENT INHALATION

If exposure limits are exceeded, or if exposure may occur, use a NIOSH/MSHA respirator approved for your conditions of exposure. Refer to the most recent NIOSH publications concerning chemical hazards, or consult your safety equipment supplier. Respiratory protection programs must be in compliance with OSHA requirements in 29 CFR 1910.134. For emergencies, a NIOSH/MSHA approved positive pressure breathing apparatus should be readily available.

VENTILATION REQUIRED:

Adequate ventilation is required to minimize exposure or to maintain exposure levels below OSHA/ACGIH requirements. Local mechanical ventilation may be required.

ADDITIONAL PROTECTIVE MEASURES

Safety shower, eye wash fountain, and washing facilities should be readily available.

SECTION IV FIRE & EXPLOSION HAZARD DATA

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 5

PRODUCT NAME : POTASSIUM PERMANGANATE FREEFLO
PRODUCT CODE : 00459

Date: 5-JAN-2004 14:05:14.79

55# DRUM

SECTION IX ADDITIONAL INFORMATION

(CONTINUED)

NAME: GENE TURNER

DATE ISSUED: 930913
DATE REVISED: 970603
UNKN = UNKNOWN

N/A = NOT APPLICABLE
N/D = NOT DETERMINED
N/E = NOT ESTABLISHED

< = LESS THAN
> = MORE THAN

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Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 1

PRODUCT NAME : SODA ASH NATURAL LIGHT
PRODUCT CODE : 07990

Date: 5-JAN-2004 14:05:46.63

50# BAG

CAS #: 000497198

MSDS No. 001277 Revision No./Date 01 931001
Detail Number 00685/01

FORMULA: Na2 CO3
CHEM. FAMILY: inorganic salts
CHEMICAL NAME AND SYNONYMS:
Soda Ash Light; Sodium Carbonate;
Soda Ash; Disodium Carbonate; Soda Calcined;
Carbonic Acid Disodium Salt;
MSDS 001277 DETAIL 00685
SUPPLIERS NAME : Harcros Chemicals Inc.
5200 Speaker Road
Kansas City KS 66106-1095

SUPPLIERS PHONE NUMBER : 913-321-3131
TRANSPORTATION EMERGENCY PHONE NUMBER : 1-800-424-9300

S.A.R.A. INFORMATION

HAZARDS : Acute
PHYSICAL DATA : Pure Solid

SECTION I HAZARDOUS INGREDIENTS

Ingredient Cas Number	MAX % W/W	SARA APPLIES 312 313 372	AIR CONTAMINMENT LEVELS		
			TWA/TLV (ppm)	STEL (ppm)	CEIL (ppm)
Sodium Carbonate Soda Ash (CAS # 497-19-8)	100.0	Y N N	PARTICULATES NOT OTHERWISE REGULATED Total TWA 15 mg/m3 OSHA Total TLV 10 mg/m3 ACGIH Respirable TWA 5 mg/m3 OSHA		

SECTION II HEALTH HAZARDS

POTENTIAL EFFECTS OF EXPOSURE

EYES
Eye contact with product may cause irritation
SKIN
Skin contact may cause irritation
INHALATION
Inhalation may cause irritation
INGESTION
Ingestion may cause irritation
TARGET ORGANS

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 2

PRODUCT NAME : SODA ASH NATURAL LIGHT
PRODUCT CODE : 07990

Date: 5-JAN-2004 14:05:46.97

50# BAG

SECTION II HEALTH HAZARDS

(CONTINUED)

OVEREXPOSURE MAY CAUSE DAMAGE TO,
DISORDERS OF, OR ADVERSELY AFFECT THE FOLLOWING SYSTEMS, FUNCTIONS, ORGANS: none currently
known

FIRST AID

FIRST AID EYES

Immediately flush eyes with plenty of water for at least 15 minutes, while holding eyelids apart
to ensure flushing of entire surface. Call a physician.

FIRST AID SKIN

Immediately flush skin with plenty of water for at least 15 minutes, while removing contaminated
clothing and shoes. Thoroughly clean clothing and shoes before reuse. Call a physician.

FIRST AID INHALATION

Remove to fresh air. If not breathing give artificial respiration, preferably mouth to mouth.

FIRST AID INGESTION

If breathing is difficult give oxygen. Call a physician.
Do not induce vomiting. Rinse mouth with water. Dilute stomach contents by drinking water. If
vomiting occurs spontaneously, keep head below hips to prevent breathing vomit into lungs. Call
a physician immediately.

OTHER INFORMATION

ROUTES OF ENTRY

skin contact inhalation

OVEREXPOSURE MAY AGGRAVATE DISORDERS OF THE

none currently known

SECTION III SPECIAL PROTECTION

PROTECTIVE EQUIPMENT

PROTECTIVE EQUIPMENT EYES

chemical goggles Always wear eye protection when working with chemicals. Do Not wear contact
lenses when working with chemicals.

PROTECTIVE EQUIPMENT SKIN

complete body covering impervious gloves safety helmet

PROTECTIVE EQUIPMENT INHALATION

If exposure limits are exceeded, or if exposure may occur, use a NIOSH/MSHA respirator approved
for your conditions of exposure. Refer to the most recent NIOSH publications concerning chemical
hazards, or consult your safety equipment supplier. Respiratory protection programs must be in
compliance with OSHA requirements in 29 CFR 1910.134. For emergencies, a NIOSH/MSHA approved
positive pressure breathing apparatus should be readily available.

VENTILATION REQUIRED:

Adequate ventilation is required to minimize exposure or to maintain exposure levels below
OSHA/ACGIH requirements. Local mechanical ventilation may be required.

ADDITIONAL PROTECTIVE MEASURES

Safety shower, eye wash fountain, and washing facilities should be readily available.

SECTION IV FIRE & EXPLOSION HAZARD DATA

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 3

PRODUCT NAME : SODA ASH NATURAL LIGHT
PRODUCT CODE : 07990

Date: 5-JAN-2004 14:05:47.58

50# BAG

SECTION III SPECIAL PROTECTION

(CONTINUED)

Flash Point (METHOD): > OR = N/A
Flammable Limits (% Volume in Air) UPPER: N/D LOWER: N/D

HMS Info Health : 1
Fire : 0
React : 0
Special : X

EXTINGUISHING MEDIA

media appropriate for surrounding fire
FIRE FIGHTING PROCEDURES

Prevent human exposure to fire, fumes, smoke, and products of combustion. Evacuate non essential personnel. Firefighters should wear full face, self contained breathing apparatus and impervious protective clothing. Not considered a fire hazard.

UNUSUAL FIRE & EXPLOSION HAZARDS

Dust can be an explosion hazard. Prevent buildup of dust on walls, floors, and equipment.

SECTION V PHYSICAL DATA

Boiling Point: > OR = 752 deg. F
Freezing Point: 1564 deg. F
Specific Gravity (H(2)O=1): > OR = 2.5000 @ 68 deg. F
Vapor Pressure (MM HG.): N/D
Vapor Density (AIR=1): N/D
Evaporation Rate (NA =1): N/D
Solubility in Water: 23%
Percent Volatile by Volume: N/D
pH: aqueous approx. > OR = 11.400

Appearance:

SOLID - POWDER, CRYSTAL, FLAKE, GRANULE
TABLET, PRILL, BRIQUETTE, ETC.

Odor :
NIL

SECTION VI REACTIVITY DATA

STABILITY

Stable

INCOMPATIBILITY

inorganic acids
HAZARDOUS DECOMPOSITION PRODUCTS
carbon monoxide carbon dioxide
HAZARDOUS POLYMERIZATION

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 4

PRODUCT NAME : SODA ASH NATURAL LIGHT
PRODUCT CODE : 07990

Date: 5-JAN-2004 14:05:48.09

50# BAG

SECTION VI REACTIVITY DATA

(CONTINUED)

Will not occur

SECTION VII SPILL AND LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

In Case Of Spills: Contain and dispose of in accordance with Federal, State and local regulations. Sweep, shovel, or pick up and return to dry, clean container.

DISPOSAL METHOD

Material that cannot be used or chemically reprocessed should be disposed of at an approved facility in accordance with any applicable regulations under the Resource Conservation and Recovery Act. Dispose of material in accordance with all Federal, State and local regulations. Local regulations may be more stringent than Federal or State.

SECTION VIII

Proper Shipping Name:

Hazard Class: UNCLASSIFIED
Label Requirements: NONE
Reportable Quantity: None

SECTION IX ADDITIONAL INFORMATION

PRECAUTIONS

Wear protective equipment when handling. Use only with adequate ventilation. Wash thoroughly after handling. Do Not breathe dust. Do Not get in eyes, on skin, or clothing. Do not swallow.

HANDLING

For industrial use only. ATTENTION: This container hazardous when emptied. Since emptied container contains product residues (vapor or liquid), all labeled hazard precautions must be observed.

STORAGE

Keep container closed when not in use. Store in a cool dry place. Keep out of reach of children.

Continued On Page 5

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 5

PRODUCT NAME : SODA ASH NATURAL LIGHT
PRODUCT CODE : 07990

Date: 5-JAN-2004 14:05:48.52

50# BAG

NAME: GENE TURNER

DATE ISSUED: 931001
DATE REVISED: 931001
UNK = UNKNOWN

N/A = NOT APPLICABLE
N/D = NOT DETERMINED
N/E = NOT ESTABLISHED

< = LESS THAN
> = MORE THAN

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Harcros Chemicals Inc
 Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 1

PRODUCT NAME : SODIUM METABISULFITE FOOD GR Date: 5-JAN-2004 14:05:52.73
 PRODUCT CODE : 01375 50# BAG

CAS # : 007681574 MSDS No. 001293 Revision No./Date 04 000627
 Detail Number 00694/03

FORMULA: Na H SO3 or Na2 S2 O5
 CHEM. FAMILY: inorganic salts
 CHEMICAL NAME AND SYNONYMS:
 Sodium Bisulfite Anhy Food; Pyrsulfurous Acid, Disodium Salt;
 Sodium Meta Bisulfite; Sodium Pyrosulfite; Sodium Bisulfite
 MSDS 001293 DETAIL 00694
 SUPPLIERS NAME : Harcros Chemicals Inc.
 5200 Speaker Road
 Kansas City KS 66106-1095

SUPPLIERS PHONE NUMBER : 913-321-3131
 TRANSPORTATION EMERGENCY PHONE NUMBER : 1-800-424-9300

S.A.R.A. INFORMATION

HAZARDS : Acute Chronic
 PHYSICAL DATA : Pure Solid

SECTION I HAZARDOUS INGREDIENTS

Ingredient Cas Number	MAX % W/W	SARA APPLIES		AIR CONTAMINENT LEVELS		SKIN AGENT		
		312	313	372	TWA/TLV (ppm)		STEL (ppm)	CEIL (ppm)
Sodium Bisulfite Sodium Hydrogen Sulfite (CAS # 7631-90-5)	2.0	Y	N	N	1.2	1.2	N N	OSHA ACGIH
Sodium Metabisulfite Sodium Pyrosulfite (CAS # 7681-57-4)	99.0	Y	N	N	0.6	0.6	N N	OSHA ACGIH

SECTION II HEALTH HAZARDS

POTENTIAL EFFECTS OF EXPOSURE
 HAZARD OVERVIEW: DANGER! CORROSIVE SOLID. CAUSES BURNS. DESTROYS BODY TISSUES.
 Decomposition or contact with acids will release poisonous sulfur dioxide gas which can cause
 death if inhaled.

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 2

PRODUCT NAME : SODIUM METABISULFITE FOOD GR
PRODUCT CODE : 01375

Date: 5-JAN-2004 14:05:53.12

50# BAG

SECTION II HEALTH HAZARDS

(CONTINUED)

EYES

Eye contact with product may cause irritation burns eye damage

SKIN

Skin contact may cause irritation burns sensitization (allergic reaction) dermatitis

INHALATION

Inhalation may cause irritation nausea vomiting diarrhea swelling breathing difficulty unconsciousness sensitization (allergic reaction) decreased blood pressure Symptoms of early to moderate central nervous system (CNS) depression include giddiness, dizziness, confusion, drunken behavior, headache, nausea, diarrhea, vomiting, tiredness and drowsiness. In extreme cases, symptoms of central nervous system (CNS) depression include stupor, convulsions, unconsciousness, coma, and even death. If used improperly in the presence of water or under acidic conditions, can release sulfur dioxide gas, which is toxic and can even cause death in extreme cases, for example, if the gas is released in a poorly ventilated area.

INGESTION

Ingestion may cause irritation nausea vomiting diarrhea swelling breathing difficulty unconsciousness sensitization (allergic reaction) central nervous system (CNS) depression Symptoms of early to moderate central nervous system (CNS) depression include giddiness, dizziness, confusion, drunken behavior, headache, nausea, diarrhea, vomiting, tiredness, and drowsiness. In extreme cases, symptoms of central nervous system (CNS) depression include stupor, convulsions, unconsciousness, coma, and even death.

TARGET ORGANS

OVEREXPOSURE MAY CAUSE DAMAGE TO,
DISORDERS OF, OR ADVERSELY AFFECT THE FOLLOWING SYSTEMS, FUNCTIONS, ORGANS: heart
ANIMAL TEST DATA
BASED ON LABORATORY TEST DATA,
OVEREXPOSURE MAY CAUSE DAMAGE TO, DISORDERS OF, OR ADVERSELY AFFECT THE FOLLOWING SYSTEMS,
FUNCTIONS, OR ORGANS:; fetus

FIRST AID

FIRST AID EYES

Immediately flush eyes with plenty of water for at least 15 minutes, while holding eyelids apart to ensure flushing of entire surface. Call a physician.

FIRST AID SKIN

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Thoroughly clean clothing before reuse. Discard contaminated shoes and contaminated leather articles. Call a physician.

FIRST AID INHALATION

Remove to fresh air. If not breathing give artificial respiration, preferably mouth to mouth. If breathing is difficult give oxygen. Call a physician.

FIRST AID INGESTION

If swallowed, do not induce vomiting unless so instructed by physician or poison control center. If vomiting occurs spontaneously, keep head below hips to prevent breathing of vomit into lungs.

Continued On Page 3

PRODUCT NAME : SODIUM METABISULFITE FOOD GR
PRODUCT CODE : 01375

Date: 5-JAN-2004 14:05:53.50

50# BAG

SECTION II HEALTH HAZARDS

(CONTINUED)

Call a physician or poison control center immediately.
OTHER INFORMATION
ROUTES OF ENTRY
skin contact inhalation

SECTION III SPECIAL PROTECTION

PROTECTIVE EQUIPMENT
PROTECTIVE EQUIPMENT EYES
chemical goggles faceshield Always wear eye protection when working with chemicals.
PROTECTIVE EQUIPMENT SKIN
impervious gloves clean protective clothing
PROTECTIVE EQUIPMENT INHALATION
If exposure limits are exceeded, or if exposure may occur, use a NIOSH/MSHA respirator approved for your conditions of exposure. Refer to the most recent NIOSH publications concerning chemical hazards, or consult your safety equipment supplier. Respiratory protection programs must be in compliance with OSHA requirements in 29 CFR 1910.134. For emergencies, a NIOSH/MSHA approved positive pressure breathing apparatus should be readily available.
VENTILATION REQUIRED:

Adequate ventilation is required to minimize exposure or to maintain exposure levels below OSHA/ACGIH requirements. Local mechanical ventilation may be required.

ADDITIONAL PROTECTIVE MEASURES

Safety shower, eye wash fountain, and washing facilities should be readily available.

SECTION IV FIRE & EXPLOSION HAZARD DATA

Flash Point (METHOD): > OR = N/A

Flammable Limits (% Volume in Air) UPPER: N/D Lower: N/D

HMIS Info	Health : 1	NFPA Info	Health : 1
	Fire : 0		Fire : 0
	React : 0		React : 0
	Special : X		Special :

EXTINGUISHING MEDIA

water spray dry chemical carbon dioxide foam

FIRE FIGHTING PROCEDURES

Prevent human exposure to fire, fumes, smoke, and products of combustion. Evacuate non essential personnel. Firefighters should wear full face, self contained breathing apparatus and impervious protective clothing. Use water to cool containers exposed to fire.

UNUSUAL FIRE & EXPLOSION HAZARDS

Harcros Chemicals Inc

Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 4

PRODUCT NAME : SODIUM METABISULFITE FOOD GR
PRODUCT CODE : 01375

Date: 5-JAN-2004 14:05:53.93

50# BAG

SECTION IV FIRE & EXPLOSION HAZARD DATA (CONTINUED)

Toxic fumes may be released.

SECTION V PHYSICAL DATA

Boiling Point: N/D
Freezing Point: N/D
Specific Gravity (H(2)O=1): > OR = 1.4800 @ 68 deg. F
Vapor Pressure (MM HG.): N/D
Vapor Density (AIR=1): N/D
Evaporation Rate (NA =1): N/D
Solubility in Water: 40%
Percent Volatile by Volume: N/D
pH: aqueous approx. > OR = 3.800
Appearance:

SOLID - POWDER, CRYSTAL, FLAKE, GRANULE
TABLET, PRILL, BRIQUETTE, ETC.

Odor :
MILD

SECTION VI REACTIVITY DATA

STABILITY

Stable

INCOMPATIBILITY

bleaching agents (oxidizers) inorganic acids Avoid contact with bleaching agents and oxidizers which include chlorine, oxygen, permanganates, perchlorates, percarbonates, peroxides, chromates, hypochlorites, nitric acid, and sulfuric acid.

HAZARDOUS DECOMPOSITION PRODUCTS

oxides of sulfur

HAZARDOUS POLYMERIZATION

Will not occur

SECTION VII SPILL AND LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Evacuate non essential personnel, eliminate ignition sources, and wear protective equipment (See Section III). Shut off source of leak only if safe to do so. Contain spill. Recover free product. To clean up residue, flush sparingly with water or use an absorbent. Avoid runoff to ground water, surface waters, and sewers. It may be necessary to remove contaminated soil. If

Continued On Page 5

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 5

PRODUCT NAME : SODIUM METABISULFITE FOOD GR
PRODUCT CODE : 01375

Date: 5-JAN-2004 14:05:54.30

50# BAG

SECTION VII SPILL AND LEAK PROCEDURES

(CONTINUED)

product is flammable or combustible, use non sparking tools. If acidity (low pH) is a problem, neutralize with hydrated lime, soda ash, or sodium bicarbonate. If alkalinity (high pH) is a problem neutralize with dilute acetic acid or dilute hydrochloric (muriatic) acid. If required, notify state and local authorities. Flush spill area with water.

DISPOSAL METHOD

Avoid discharge to sewers or waterways. Dispose of material in accordance with all Federal, State and local regulations. Local regulations may be more stringent than Federal or State.

SECTION VIII

Proper Shipping Name: UNCLASSIFIED

Label Requirements: NONE
Reportable Quantity: None

SECTION IX ADDITIONAL INFORMATION

PRECAUTIONS

Wear protective equipment when handling. Use only with adequate ventilation. Wash thoroughly after handling. Do Not breathe dust. Do Not get in eyes, on skin, or clothing. Do not swallow.

HANDLING

For industrial use only. ATTENTION: This container hazardous when emptied. Since emptied container contains product residues (vapor or liquid), all labeled hazard precautions must be observed.

STORAGE

Keep container closed when not in use. Store in a cool dry place. Store away from oxidizers. Store out of direct sunlight and away from heat. Keep out of reach of children.

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 6

PRODUCT NAME : SODIUM METABISULFITE FOOD GR
PRODUCT CODE : 01375

50# BAG

Date: 5-JAN-2004 14:05:54.80

NAME: GENE TURNER

DATE ISSUED: 930930
DATE REVISED: 000627
UNK = UNKNOWN

N/A = NOT APPLICABLE
N/D = NOT DETERMINED
N/E = NOT ESTABLISHED

< = LESS THAN
> = MORE THAN

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Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 1

PRODUCT NAME : HYDROFLUOSILICIC ACID 23%
PRODUCT CODE : 10715

Date: 5-JAN-2004 14:05:10.70

BULK/#

CAS #: 016961834

MSDS No. 000605

Revision No./Date 03 930512

Detail Number 00275/02

FORMULA: H2SiF6
CHEM. FAMILY: inorganic acids
CHEMICAL NAME AND SYNONYMS:
Hydrofluosilicic Acid, 20-30%
Fluosilicic Acid;
Hexafluosilicic Acid;
MSDS 000605 DETAIL 00275

SUPPLIERS NAME : Harcros Chemicals Inc.
5200 Speaker Road
Kansas City KS 66106-1095

SUPPLIERS PHONE NUMBER : 913-321-3131
TRANSPORTATION EMERGENCY PHONE NUMBER : 1-800-424-9300

S.A.R.A. INFORMATION

HAZARDS : Acute Chronic
PHYSICAL DATA : Pure Liquid

SECTION I HAZARDOUS INGREDIENTS

Ingredient Cas Number	MAX % W/W	SARA APPLIES		AIR CONTAMINENT LEVELS			
		312	313	372	TWA/TLV (ppm)	STEL (ppm)	CEIL (ppm)
Hydrofluosilicic Acid Fluosilicic Acid (CAS # 16961-83-4)	30.0	Y	N	N	As Fluorine TWA/TLV 2.5 mg/m3	OSHA/ACGIH	

SECTION II HEALTH HAZARDS

POTENTIAL EFFECTS OF EXPOSURE

EYES

Eye contact with product may cause severe irritation severe burns irreversible damage
blindness Effects may be delayed.

SKIN

Skin contact may cause burning sensation pain severe burns tissue destruction skin damage

Continued On Page 2

Harcros Chemicals Inc
Kansas City, Kansas

MA TERIAL SAFETY DATA SHEET Page 2

PRODUCT NAME : HYDROFLUOSILICIC ACID 23%
PRODUCT CODE : 10715

Date: 5-JAN-2004 14:05:11.13

BULK/#

SECTION II HEALTH HAZARDS

(CONTINUED)

May be absorbed in harmful amounts.
Absorption thru skin may cause symptoms described under inhalation and ingestion. Effects may be delayed.

INHALATION

Inhalation may cause severe irritation coughing choking chest pain bronchitis burns tissue ulceration excess fluid retention (pulmonary edema) lung damage, damage to respiratory system lowered calcium level in the blood (hypocalcemia) coma even death Effects may be delayed.

INGESTION

Ingestion may cause nausea vomiting diarrhea burns tissue ulceration gastrointestinal damage lowered calcium level in the blood (hypocalcemia) coma even death Effects may be delayed.

TARGET ORGANS

OVEREXPOSURE MAY CAUSE DAMAGE TO,

bones teeth respiratory system blood kidneys liver

FIRST AID

FIRST AID EYES

Immediately flush eyes with plenty of water for at least 15 minutes, while holding eyelids apart to ensure flushing of entire surface. Call a physician.

FIRST AID SKIN

Immediately flush skin with plenty of water for at least 15 minutes, while removing contaminated clothing and shoes. Thoroughly clean clothing and shoes before reuse. Call a physician.

FIRST AID INHALATION

Remove to fresh air. If not breathing give artificial respiration, preferably mouth to mouth. If breathing is difficult give oxygen. Call a physician.

FIRST AID INGESTION

Do not induce vomiting. Rinse mouth with water. Dilute stomach contents by drinking water. If vomiting occurs spontaneously, keep head below hips to prevent breathing vomit into lungs. Call a physician immediately.

OTHER INFORMATION

ROUTES OF ENTRY

eye contact skin contact skin absorption inhalation

OVEREXPOSURE MAY AGGRAVATE DISORDERS OF THE

eyes skin respiratory system

SECTION III SPECIAL PROTECTION

PROTECTIVE EQUIPMENT

PROTECTIVE EQUIPMENT EYES

faceshield safety glasses

PROTECTIVE EQUIPMENT SKIN

Always wear eye protection when working with chemicals.

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 3

PRODUCT NAME : HYDROFLUOSILICIC ACID 23%
PRODUCT CODE : 10715

Date: 5-JAN-2004 14:05:11.52

BULK/#

SECTION III SPECIAL PROTECTION (CONTINUED)

impervious gloves acid proof clothing rubber boots rubber apron
PROTECTIVE EQUIPMENT INHALATION

If exposure limits are exceeded, or if exposure may occur, use a NIOSH/MSHA respirator approved for your conditions of exposure. Refer to the most recent NIOSH publications concerning chemical hazards, or consult your safety equipment supplier. Respiratory protection programs must be in compliance with OSHA requirements in 29 CFR 1910.134. For emergencies, a NIOSH/MSHA approved positive pressure breathing apparatus should be readily available.

VENTILATION REQUIRED:

Adequate ventilation is required to minimize exposure or to maintain exposure levels below OSHA/ACGIH requirements

ADDITIONAL PROTECTIVE MEASURES

Safety shower, eye wash fountain, and washing facilities should be readily available.

SECTION IV FIRE & EXPLOSION HAZARD DATA

Flash Point (METHOD): > OR = N/A
Flammable Limits (% Volume in Air) UPPER: N/D Lower: N/D

HMIS Info Health : 3
Fire : 0
React : 0
Special : X

EXTINGUISHING MEDIA

media appropriate for surrounding fire
FIRE FIGHTING PROCEDURES

Prevent human exposure to fire, fumes, smoke, and products of combustion. Evacuate non essential personnel. Firefighters should wear full face, self contained breathing apparatus and impervious protective clothing. Use water to cool containers exposed to fire.

UNUSUAL FIRE & EXPLOSION HAZARDS

Toxic fumes may be released.

SECTION V PHYSICAL DATA

Boiling Point: > OR = 222 deg. F
Freezing Point: 16 deg. F
Specific Gravity (H₂O=1): 1.1700 to 1.2700 @ 68 deg. F
Vapor Pressure (MM HG.): > OR = 24.000 @ 77 deg. F
Vapor Density (AIR=1) : N/D
Evaporation Rate (NA =1): N/D

Continued On Page 4

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 4

PRODUCT NAME : HYDROFLUOSILLICIC ACID 23%
PRODUCT CODE : 10715

Date: 5-JAN-2004 14:05:11.91

BULK/#

SECTION V PHYSICAL DATA

(CONTINUED)

Solubility in Water: COMPLETE
Percent Volatile by Volume: N/D
pH: aqueous approx. > OR = 1.200
Appearance:
COLORED LIQUID

Odor :
SHARP

SECTION VI REACTIVITY DATA

STABILITY

Stable

INCOMPATIBILITY

metals/metal blends inorganic acids organic bases clays organic nitrogen compounds Contact
with some metals can generate explosive hydrogen gas.

HAZARDOUS DECOMPOSITION PRODUCTS

hydrogen fluoride

HAZARDOUS POLYMERIZATION

Will not occur

SECTION VII SPILL AND LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Evacuate non essential personnel, eliminate ignition sources, and wear protective equipment (See Section III). Shut off source of leak only if safe to do so. Contain spill. Recover free product. To clean up residue, flush sparingly with water or use an absorbent. Avoid runoff to ground water, surface waters, and sewers. It may be necessary to remove contaminated soil. If product is flammable or combustible, use non sparking tools. If acidity (low pH) is a problem, neutralize with hydrated lime, soda ash, or sodium bicarbonate. If alkalinity (high pH) is a problem neutralize with dilute acetic acid or dilute hydrochloric (muriatic) acid. If required, notify state and local authorities.

DISPOSAL METHOD

Avoid discharge to sewers or waterways. Solids must be disposed of in a permitted waste management facility. Recovered liquids may be reprocessed or incinerated. Incineration must be handled in a permitted hazardous waste management facility. Dispose of material in accordance with all Federal, State and local regulations. Local regulations may be more stringent than Federal or State.

SECTION VIII

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 5

PRODUCT NAME : HYDROFLUOSILICIC ACID 23%
PRODUCT CODE : 10715

Date: 5-JAN-2004 14:05:12.24

BULK/#

SECTION VII SPILL AND LEAK PROCEDURES

(CONTINUED)

Proper Shipping Name: FLUOROSILICIC ACID

Hazard Class: 8, UN1778, PGII
Label Requirements: CORROSIVE
Reportable Quantity: None

SECTION IX ADDITIONAL INFORMATION

PRECAUTIONS

Wear protective equipment when handling. Use only with adequate ventilation. Wash thoroughly after handling. Do Not breathe vapor, mist, or dust. Do Not get in eyes, on skin, or clothing. Do not swallow.

HANDLING

Do not use glass containers. For industrial use only. ATTENTION: This container hazardous when emptied. Since emptied container contains product residues (vapor or liquid), all labeled hazard precautions must be observed.

STORAGE

Keep container closed when not in use. Store in a cool dry place. Keep out of reach of children. Do not use glass containers.

SECTION X COMPLIANCE INFORMATION

NSF INFORMATION

MAXIMUM USE LEVEL IN POTABLE WATER:

For 23% Hydrofluosilicic Acid (23% Fluosilicic Acid): 6 mg/L.

NAME: GENE TURNER

DATE ISSUED: 930512
DATE REVISED: 930512
UNKN = UNKNOWN

N/A = NOT APPLICABLE
N/D = NOT DETERMINED
N/E = NOT ESTABLISHED

< = LESS THAN
> = MORE THAN

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Harcros Chemicals Inc
 Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 1

PRODUCT NAME : POTASSIUM PERMANGANATE FREEFLO
 PRODUCT CODE : 00459

Date: 5-JAN-2004 14:05:13.29

55# DRUM

CAS #: 007722647

MSDS No. 001179 Revision No./Date 03 970603
 Detail Number 00606/02

FORMULA: KMnO4

CHEM. FAMILY: bleaching agents (oxidizers)

CHEMICAL NAME AND SYNONYMS:

Potassium Permanganate, Nuggets, FF, Tech, USP;
 Permanganic Acid Potassium Salt;
 Chameleon Mineral;
 Candy's Crystals;
 Permanganate of Potash;
 Cairox Potassium Permanganate;
 MSDS 001179 DETAIL 00606

SUPPLIERS NAME : Harcros Chemicals Inc.
 5200 Speaker Road
 Kansas City KS 66106-1095

SUPPLIERS PHONE NUMBER : 913-321-3131
 TRANSPORTATION EMERGENCY PHONE NUMBER : 1-800-424-9300

S. A. R. A. INFORMATION

HAZARDS : Acute Fire Reactivity Chronic
 PHYSICAL DATA : Pure Solid

SECTION I HAZARDOUS INGREDIENTS

Ingredient Cas Number	MAX % W/W	SARA APPLIES 312 313 372	AIR CONTAMINANT LEVELS			
			TWA/TLV (ppm)	STEL (ppm)	CEIL (ppm)	SKIN AGENT
Potassium Permanganate Potash Permanganate (CAS # 7722-64-7)	99.0	Y Y Y	As Manganese TLV 0.2 mg/m3 ACGIH CEILING 5.0 mg/m3 OSHA			

SECTION II HEALTH HAZARDS

POTENTIAL EFFECTS OF EXPOSURE

EYES

Eye contact with product may cause burns irreversible damage

SKIN

Skin contact may cause irritation burns skin damage

INHALATION

Inhalation may cause irritation lung damage, damage to respiratory system

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 1

PRODUCT NAME : MURIATIC ACID 20BE
PRODUCT CODE : 05172

Date: 5-JAN-2004 14:05:06.56

BULK/#

CAS #: 007647010

MSDS No. 003143 Revision No./Date 01 990628
Detail Number 00274/01

FORMULA: HCl + H2O
CHEM. FAMILY: inorganic acids
CHEMICAL NAME AND SYNONYMS:
Hydrochloric Acid;
Muriatic Acid;
Aqueous Hydrogen Chloride;
Chlorohydric Acid;
MSDS NO. 003143 DETAIL NO. 00274
SUPPLIERS NAME : Harcros Chemicals Inc.
5200 Speaker Road
Kansas City KS 66106-1095

SUPPLIERS PHONE NUMBER : 913-321-3131
TRANSPORTATION EMERGENCY PHONE NUMBER : 1-800-424-9300

S.A.R.A. INFORMATION

HAZARDS : Acute Chronic
PHYSICAL DATA : Mixture Liquid

SECTION I HAZARDOUS INGREDIENTS

Ingredient Cas Number	MAX % W/W	SARA APPLIES		TWA/TLV (ppm)	AIR CONTAMINENT LEVELS		SKIN AGENT
		312	313		STEL (ppm)	CELL (ppm)	
Hydrochloric Acid Muriatic Acid (CAS # 7647-01-0)	33.0	Y	N			5	N N

SECTION II HEALTH HAZARDS

POTENTIAL EFFECTS OF EXPOSURE

EYES
Eye contact with product may cause irritation pain tears excess fluid retention (edema)
tissue destruction blindness
SKIN
Skin contact may cause dermatitis pain redness burns tissue ulceration

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 2

PRODUCT NAME : MURIATIC ACID 20BE
PRODUCT CODE : 05172

Date: 5-JAN-2004 14:05:06.88

BULK/#

SECTION II HEALTH HAZARDS

(CONTINUED)

INHALATION

Inhalation may cause irritation burns coughing choking tissue ulceration bronchitis pneumonia irregular heartbeat headache swelling suffocation especially in confined spaces even death

Prolonged or repeated overexposure by inhalation may cause erosion of teeth bronchitis

INGESTION

Ingestion may cause burns pain nausea vomiting diarrhea weakness shock symptoms (rapid pulse, sweating, collapse) tissue perforation even death

FIRST AID

FIRST AID EYES

Immediately flush eyes with plenty of water for at least 15 minutes, while holding eyelids apart to ensure flushing of entire surface. Call a physician.

FIRST AID SKIN

Immediately flush skin with plenty of water for at least 15 minutes, while removing contaminated clothing and shoes. Thoroughly clean clothing and shoes before reuse. Call a physician.

FIRST AID INHALATION

Remove to fresh air. If not breathing give artificial respiration, preferably mouth to mouth. If breathing is difficult give oxygen. Call a physician.

FIRST AID INGESTION

Do not induce vomiting. Rinse mouth with water. Dilute stomach contents by drinking water. If vomiting occurs spontaneously, keep head below hips to prevent breathing vomit into lungs. Call a physician immediately.

OTHER INFORMATION

ROUTES OF ENTRY

eye contact skin contact inhalation
OVEREXPOSURE MAY AGGRAVATE DISORDERS OF THE lungs

SECTION III SPECIAL PROTECTION

PROTECTIVE EQUIPMENT

PROTECTIVE EQUIPMENT EYES

Chemical goggles faceshield

Do Not wear contact lenses when working with chemicals.

PROTECTIVE EQUIPMENT SKIN

acid proof gloves acid proof clothing

PROTECTIVE EQUIPMENT INHALATION

If exposure limits are exceeded, or if exposure may occur, use a NIOSH/MSHA respirator approved for your conditions of exposure. Refer to the most recent NIOSH publications concerning chemical hazards, or consult your safety equipment supplier. Respiratory protection programs must be in compliance with OSHA requirements in 29 CFR 1910.134. For emergencies, a NIOSH/MSHA approved positive pressure breathing apparatus should be readily available.

MATERIAL SAFETY DATA SHEET Page 3

PRODUCT NAME : MURIATIC ACID 20BE
PRODUCT CODE : 05172

Date: 5-JAN-2004 14:05:07.29

BULK/#

SECTION III SPECIAL PROTECTION (CONTINUED)

VENTILATION REQUIRED:

Adequate ventilation is required to minimize exposure or to maintain exposure levels below OSHA/ACGIH requirements.

ADDITIONAL PROTECTIVE MEASURES

Safety shower, eye wash fountain, and washing facilities should be readily available.

SECTION IV FIRE & EXPLOSION HAZARD DATA

Flash Point (METHOD): > OR = N/A
Flammable Limits (% Volume in Air) UPPER: N/D LOWER: N/D

HMIS Info Health : 3 NFPA Info Health : 3
Fire : 0 Fire : 0
React : 0 React : 0
Special : X Special :

EXTINGUISHING MEDIA

water spray dry chemical carbon dioxide foam

FIRE FIGHTING PROCEDURES

Prevent human exposure to fire, fumes, smoke, and products of combustion. Evacuate non essential personnel. Firefighters should wear full face, self contained breathing apparatus and impervious protective clothing. Use water to cool containers exposed to fire.

UNUSUAL FIRE & EXPLOSION HAZARDS

Toxic fumes may be released.

SECTION V PHYSICAL DATA

Boiling Point: > OR = 182 deg. F
Freezing Point: 1 deg. F
Specific Gravity (H(2)O=1): > OR = 1.1600 @ 60 deg. F
Vapor Pressure (MM HG.): > OR = 28.000 @ 68 deg. F
Vapor Density (AIR=1): > OR = 1.27000
Evaporation Rate (N-Butyl Acetat =1): < 1.0000
Solubility in Water: COMPLETE
Percent Volatile by Volume: 99.00 to 100.00
pH: aqueous approx. < 1.000
Appearance: COLORLESS TO LIGHTLY COLORED LIQUID

Odor :
SHARP

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 4

PRODUCT NAME : MURIATIC ACID 20BE
PRODUCT CODE : 05172

Date: 5-JAN-2004 14:05:07.64

BULK/#

SECTION V PHYSICAL DATA

(CONTINUED)

SECTION VI REACTIVITY DATA

STABILITY

Stable

INCOMPATIBILITY

metals/metal blends inorganic bases organic bases bleaching agents (oxidizers) Avoid contact with bleaching agents and oxidizers which include chlorine, oxygen, permanganates, perchlorates, percarbonates, peroxides, chromates, hypochlorites, nitric acid, and sulfuric acid. Contact with some metals can generate explosive hydrogen gas.

HAZARDOUS DECOMPOSITION PRODUCTS

hydrogen chloride

HAZARDOUS POLYMERIZATION

Will not occur

SECTION VII SPILL AND LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Evacuate non essential personnel, eliminate ignition sources, and wear protective equipment (See Section III). Shut off source of leak only if safe to do so. Contain spill. Recover free product. To clean up residue, flush sparingly with water or use an absorbent. Avoid runoff to ground water, surface waters, and sewers. It may be necessary to remove contaminated soil. If product is flammable or combustible, use non sparking tools. If acidity (low pH) is a problem, neutralize with hydrated lime, soda ash, or sodium bicarbonate. If alkalinity (high pH) is a problem neutralize with dilute acetic acid or dilute hydrochloric (muriatic) acid. If required, notify state and local authorities.

DISPOSAL METHOD

Solids must be disposed of in a permitted waste management facility. Recovered liquids may be reprocessed or incinerated. Incineration must be handled in a permitted hazardous waste management facility. Dispose of material in accordance with all Federal, State and local regulations. Local regulations may be more stringent than Federal or State.

SECTION VIII

Proper Shipping Name: HYDROCHLORIC ACID SOLUTION

Hazard Class: 8, UN1789, PGII

Label Requirements: CORROSIVE

Reportable Quantity: 15873 lbs shipments are reportable

SECTION IX ADDITIONAL INFORMATION

Continued On Page 5

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 5

PRODUCT NAME : MURIATIC ACID 20BE
PRODUCT CODE : 05172

Date: 5-JAN-2004 14:05:08.04

BULK/#

SECTION IX ADDITIONAL INFORMATION (CONTINUED)

PRECAUTIONS

Do Not breathe vapor, mist, or dust. Do Not get in eyes, on skin, or clothing. Do not swallow.
Wash thoroughly after handling.

HANDLING

When diluting, add acid to water, never water to acid. ATTENTION: This container hazardous when emptied. Since emptied container contains product residues (vapor or liquid), all labeled hazard precautions must be observed.

STORAGE

Keep container closed when not in use. Store in a cool dry place. Keep out of reach of children.

NAME: GENE TURNER

DATE ISSUED: 990628
DATE REVISED: 990628
UNK = UNKNOWN

< = LESS THAN
> = MORE THAN

N/A = NOT APPLICABLE
N/D = NOT DETERMINED
N/E = NOT ESTABLISHED

The information provided in this Material Safety data sheet has been obtained from sources believed to be reliable. Harcros Chemicals Inc provides no warranties, either expressed or implied and assumes no responsibility for the accuracy or completeness of the data contained herein. This information is offered for your information, consideration, and investigation. You should satisfy yourself that you have all current data relevant to your particular use. Harcros Chemicals Inc knows of no medical condition, other than those noted on this material safety data sheet, which are generally recognized as being aggravated by exposure to this product.

Harcros Chemicals Inc
 Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 1

PRODUCT NAME : PPG ACCU-TAB BLUE TABLETS
 PRODUCT CODE : 13880

Date: 5-JAN-2004 14:05:03.19

55# PAIL

CAS #: 007778543

MSDS No. 000382 Revision No./Date 01 921230
 Detail Number C0148/01

FORMULA: Ca(OCl)2
 CHEM. FAMILY: bleaching agents (oxidizers)
 CHEMICAL NAME AND SYNONYMS:
 Calcium Hypochlorite 60% to 80%;
 FS Generic Chloro Shock; Freestyle Calc Hypochlorite;
 Pittchlor Calcium Hypochlorite; Pittabs Calcium Hypochlorite;
 PPG Calcium Hypochlorite; PPG Calcium Hypochlorite 70%;
 PPG N-200 Calc Hypochlorite; PPG N-101 Calc Hypochlorite;
 Pittabs Calc Hypochlorite; PPG Only 1 Calc Hypochlorite;
 Freestyle Calcium Hypochlorite; FS Calcium Hypochlorite;
 Freestyle Supershock Chlor; Pittchlor; Induchlor;
 Chlormor Giant Tabs; Chlormor 65; Chloro Shock;
 Sustain Calc Hypochlorite; Inductor Calcium Hypochlorite;
 Norweco Bio-Sanitizer Tablets; Bio-Sanitizer;
 HTH Dry Chlorine Granular; HTH Calcium Hypochlorite;
 MSDS No. 000382 DETAIL No. 00148

SUPPLIERS NAME : Harcros Chemicals Inc.
 5200 Speaker Road
 Kansas City KS 66106-1095

SUPPLIERS PHONE NUMBER : 913-321-3131
 TRANSPORTATION EMERGENCY PHONE NUMBER : 1-800-424-9300

S.A.R.A. INFORMATION

HAZARDS : Acute
 PHYSICAL DATA : Mixture Solid

SECTION I HAZARDOUS INGREDIENTS

Ingredient Cas Number	MAX % W/W	SARA APPLIES		AIR CONTAMINENT LEVELS			
		312	313	372	TWA/TLV (ppm)	STEL (ppm)	CEIL (ppm)
Calcium Hypochlorite Calcium Oxchloride (CAS # 7778-54-3)	75.0	Y	N	N	INDUSTRY RECOMMENDATION (PPG) 2 mg/m3		

SECTION II HEALTH HAZARDS

Continued On Page 2

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 2

PRODUCT NAME : PPG ACCU-TAB BLUE TABLETS
PRODUCT CODE : 13880

Date: 5-JAN-2004 14:05:03.54

55# PAIL

SECTION II HEALTH HAZARDS (CONTINUED)

POTENTIAL EFFECTS OF EXPOSURE

EYES

Eye contact with product may cause severe irritation burns blindness

SKIN

Skin contact may cause severe irritation burns tissue destruction

INHALATION

Inhalation may cause irritation coughing pain decreased breathing capacity excess fluid retention (pulmonary edema)

INGESTION

Ingestion may cause burns tissue destruction even death

TARGET ORGANS

OVEREXPOSURE MAY CAUSE DAMAGE TO,

eyes respiratory system gastrointestinal tract kidneys liver

FIRST AID

FIRST AID EYES

Immediately flush eyes with plenty of water for at least 15 minutes, while holding eyelids apart to ensure flushing of entire surface. Call a physician.

FIRST AID SKIN

Immediately flush skin with plenty of water for at least 15 minutes, while removing contaminated clothing and shoes. Thoroughly clean clothing and shoes before reuse. Call a physician.

FIRST AID INHALATION

Remove to fresh air. If not breathing give artificial respiration, preferably mouth to mouth. If breathing is difficult give oxygen. Call a physician.

FIRST AID INGESTION

Do not induce vomiting. Rinse mouth with water. Dilute stomach contents by drinking water. If vomiting occurs spontaneously, keep head below hips to prevent breathing vomit into lungs. Call a physician immediately.

OTHER INFORMATION

ROUTES OF ENTRY

eye contact skin contact inhalation ingestion

CARCINOGEN STATUS

No components, present in excess of 0.1% by weight are listed as carcinogens by IARC, NTP, or OSHA.

SECTION III SPECIAL PROTECTION

PROTECTIVE EQUIPMENT

PROTECTIVE EQUIPMENT EYES

chemical goggles Do Not wear contact lenses when working with chemicals.

PROTECTIVE EQUIPMENT SKIN

Continued On Page 3

PRODUCT NAME : PPG ACCU-TAB BLUE TABLETS
 PRODUCT CODE : 13880

Date: 5-JAN-2004 14:05:03.94
 55# PAIL

(CONTINUED)

SECTION III SPECIAL PROTECTION

impervious gloves rubber apron rubber boots clean body covering clothing
 PROTECTIVE EQUIPMENT INHALATION
 If exposure limits are exceeded, or if exposure may occur, use a NIOSH/MSHA respirator approved for your conditions of exposure. Refer to the most recent NIOSH publications concerning chemical hazards, or consult your safety equipment supplier. Respiratory protection programs must be in compliance with OSHA requirements in 29 CFR 1910.134. For emergencies, a NIOSH/MSHA approved positive pressure breathing apparatus should be readily available.
 VENTILATION REQUIRED:

Adequate ventilation is required to minimize exposure or to maintain exposure levels below OSHA/ACGIH requirements. None normally required.
 ADDITIONAL PROTECTIVE MEASURES
 Safety shower, eye wash fountain, and washing facilities should be readily available.

SECTION IV FIRE & EXPLOSION HAZARD DATA

Flash Point (METHOD): > OR = N/A
 Flammable Limits (% Volume in Air) UPPER: N/D LOWER: N/D

HMIS Info Health : 2
 Fire : 0
 React : 2
 Special : X

EXTINGUISHING MEDIA

water

FIRE FIGHTING PROCEDURES
 Prevent human exposure to fire, fumes, smoke, and products of combustion. Evacuate non essential personnel. Firefighters should wear full face, self contained breathing apparatus and impervious protective clothing.

UNUSUAL FIRE & EXPLOSION HAZARDS

Product does not burn, but can provide oxygen which can intensify a fire. Intense heat may cause pressure buildup and rupture container. Product is an oxidizer. It may react vigorously with organics or other materials resulting in an explosion and fire.

SECTION V PHYSICAL DATA

Boiling Point: N/D
 Freezing Point: N/D
 Specific Gravity (H(2)O=1): > OR = 0.9800 @ 68 deg. F
 Vapor Pressure (MM HG.): N/D

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 5

PRODUCT NAME : PPG ACCU-TAB BLUE TABLETS
PRODUCT CODE : 13880

Date: 5-JAN-2004 14:05:04.60

55# PAIL

SECTION VIII

(CONTINUED)

Hazard Class: 5.1, UN2880, PGII
Label Requirements: OXIDIZER
Reportable Quantity: All shipments are reportable

SECTION IX ADDITIONAL INFORMATION

PRECAUTIONS

Do Not get in eyes, on skin, or clothing. Keep from contact with clothing or other combustible materials. Do not swallow.

HANDLING

Keep heat, lights, fire, and sparks away. ATTENTION: This container hazardous when emptied. Since emptied container contains product residues (vapor or liquid), all labeled hazard precautions must be observed.

STORAGE

Keep container closed when not in use. Store in a cool dry place. Keep out of reach of children.

SECTION X COMPLIANCE INFORMATION

TSCA INVENTORY STATUS :
Listed

NAME: GENE TURNER

DATE ISSUED: 921230
DATE REVISED: 921230
UNK = UNKNOWN

N/A = NOT APPLICABLE
N/D = NOT DETERMINED
N/E = NOT ESTABLISHED

< = LESS THAN
> = MORE THAN

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Harcros Chemicals
5132 Trenton Street
Tampa, FL 33619



FAX COVER SHEET

TO: Cherone Peterson @ Lee County
FAX #: 239-344-5460
DATE: 2-12-04
FROM: Tom Lillyer
NUMBER OF PAGES (INCLUDING COVER) 1 of 2

MESSAGE:

Re: Stabilized vs Unstabilized
Calcium Hypochlorite Tablets

The POH product is "unstabilized."

The Price per # is \$1.79 # Sel

We quoted in 55# pails or 48 pails

24 x 100 # drum @ \$1.79 = \$4296.00

48 x 55 # pails @ \$1.79 = 4725.60

43 x 55 # pails @ 1.79 = 4296.00

If you have any questions or problems, please contact the sender at phone number (813) 247-4531 or by fax at (813) 247-7917.

?400#
?640#
2400#

ADDENDUM #1/FORMAL QUOTATION NO.: Q-040024

SECTION 2, ANIONIC POLYMERS

Specify product name: _____

\$ _____ EA. X 24,000 lbs = Total Cost \$ N-B

Manufacturer _____ PolyFloc AP 1100P, or equal

MINIMUM ORDER QUANTITY: _____

SECTION 3, AQUA AMMONIA 18%

Specify product name: _____

\$ _____ EA. X 8,000 gallons = Total Cost \$ N-B

Manufacturer _____

MINIMUM ORDER QUANTITY: _____

SECTION 4, BENTONITE CLAY ACCUFLOC SDG

Specify product name: _____

\$ _____ EA. X 500 lbs = Total Cost \$ N-B

MINIMUM ORDER QUANTITY: _____

SECTION 5, CALCIUM HYPOCHLORITE 3 inch (stabilized) tablets

Specify product name: PPH ACUTABS

\$1.79# EA. X 24 (100# pails) = Total Cost \$ 4,296.00
~~\$1.79.00 EA~~

MINIMUM ORDER QUANTITY: 6 pails @ 55#

1.79# X 55# each pail X 48 pails Pail each = 4725.00

SECTION 6, CITRIC ACID

Specify product name: HARGROS LABEL #1484

\$.69# EA. X 500 lbs = Total Cost \$ 845.00

MINIMUM ORDER QUANTITY: 500#

Pam Kelly
2-12-04
PPH is unstabilized

Pam Kelly

Harcros Chemicals
5132 Trenton Street
Tampa, FL 33619

813-247-7917



FAX COVER SHEET

TO: Cherone Ottom@LeeCounty

FAX #: 239-344-5460

DATE: 2-12-04

FROM: Tom Lillyer

NUMBER OF PAGES (INCLUDING COVER) 12 pg

MESSAGE:

Re: Citric Acid U.S.P. Granular

We have 2 sources Germany or China
both are labeled U.S.P. - FCC.

Neither product has a NSF testing although
it meets the AWS spec. for NSF.

The PPK Acetate A.S. are 55# pail
the equivalent to the PC-13879 MRS
March 3" tablets

Spec attached

Tom Lillyer

If you have any questions or problems, please contact the sender at phone number (813) 247-4531 or by fax at (813) 247-7917.

Jungbunzlauer

JUNGBUNZLAUER GES.M.B.H.

MESSRS.
JUNGBUNZLAUER INC.

7 WELLS AVENUE
NEWTON CENTRE MA 02459
USA

Schwarzenbergplatz 16
A-1011 Wien, Postfach 546
Telefon: (1) 502 00-0
Telefax: (1) 502 00-8
Firmenbuch-Nr. 111075
Handelsgericht: Wien

USCG-LAKELAND

Y/order : PO 111.976/01-07
Our order no. : 200411.5
Our Invoice : 001395
Date : 2000.03.02
Truck/Fcl-No. : HLXU 208.800-B

CERTIFICATE OF ANALYSIS
according to USP 23 / FCC 4
C6 H8 O7

Quantity kgs	BAGS	Quality description	Lot no.
18,144	800	CITRIC ACID ANHYDROUS FINE F 6000	6973/02.03

Characteristics	colourless crystals or white, crystalline powder
Identification	conforms
Appearance of solution	conforms
Oxalate	conforms
Sulphate	conforms
Arsenic	less than 1 mg/kg
Heavy metals	less than 5 mg/kg
Lead	less than 0.5 mg/kg
Readily carbonizable substances	conforms
Tridodecylamine	not more than 0.1 mg/kg
Ultraviolet absorbance (polycyclic aromatic hydrocarbons) (280 - 289 nm)	not more than 0.25
Organic volatile impurities:	conforms
Residue on ignition	less than 0.05 %
Water	0.07 %
Assay	100.05 %
Sieve analysis	> 0.600 mm 0.15 % > 0.250 mm 95.64 % Bottom 4.21 %
Production date	2000.02.25
Expiry Date	3 years

QUALITY CONTROL MANAGER
Dr. Otto Bollmann

ISO 9002 certified by Lloyds - Reg.No. 200628
This computer generated certificate is valid without signature.

Nov 19 03 02:38p

SLEEPER INTERCONTINENTAL

858 793 1004

10 JUL 2003 9:39

ADVANCED CHEMICALS 852 2721 6614

NO.687 P.2



Certificate Number R533065

先進



ADVANCED CHEMICALS LIMITED • 先進化工有限公司

SALES SPECIFICATION

PRODUCT NAME: CITRIC ACID ANHYDROUS GRANULAR - FCC, USP24, BP93

ACL ANAGRAM: CAA.G

REFERENCE: PRC - 001

REVISION DATE: OCTOBER 31, 2001

ASSAY	99.50 - 100.50%
MOLECULAR WEIGHT	192.13
BARIUM CONTENT	COMPLIES WITH STANDARD
CALCIUM CONTENT	200PPM MAX
HEAVY METALS CONTENT	10PPM MAX
IRON CONTENT	50PPM MAX
CHLORIDE CONTENT	50PPM MAX
OXALATE CONTENT	350PPM MAX
SULPHATE CONTENT	150PPM MAX
READILY CARBONISABLE SUBSTANCES	COMPLIES WITH STANDARD
WATER CONTENT	0.5% MAX
ARSENIC CONTENT	1PPM MAX
SOLUBILITY	COMPLIES WITH STANDARD
SULPHATED ASH	0.1% MAX
RESIDUE ON IGNITION	0.05% MAX
PARTICLE SIZE	5% MAX ON U.S. SIEVE 30 10% MAX THROUGH U.S. SIEVE 60
APPEARANCE	COLOURLESS CRYSTALS OR WHITE, FINE POWDER
PACKING	25KG MULTI-PLY PAPER BAGS WITH PLASTIC IN-LINER, OR 50LB MULTI-PLY PAPER BAGS WITH PLASTIC IN-LINER
ORIGIN	P.R. CHINA

九龍尖沙咀東部科學館14樓新永華中心B室電話701-7068
 家話：(八五二) 二七二五二五五七-八、二七二五三〇七五 傳真：(八五二) 二七二五三六一一、二七二五三〇二〇
 Suite 701-708, 7/F, Tower B, New Mandarin Plaza, 14 Science Museum Road, Tsimshatsui East, Kowloon, Hong Kong.
 Tel: (852) 2721 2257-8, 2721 3078 Fax: (852) 2721 6614, 2721 4120 E-mail: info@acchk.com.hk



ISO 9002 : 1996
Certificate No. C6487

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 1 of 4

PRODUCT NAME : CITRIC ACID ANHYDROUS USP
PRODUCT CODE : 20806

Date: 10-JAN-2003 13:14:38.75

50# BAG-GRA

CAS #: 000077929

MSDS No. 000390 Revision No./Date 02 921230
Detail Number 00155/02

FORMULA: C6H8O7
CHEM. FAMILY: organic acids
CHEMICAL NAME AND SYNONYMS:
Citric Acid, Anhydrous;
MSDS 000390 DETAIL 06155

SUPPLIERS NAME : Harcros Chemicals Inc.
5200 Speaker Road
Kansas City KS 66106-1095

SUPPLIERS PHONE NUMBER : 913-321-3131
TRANSPORTATION EMERGENCY PHONE NUMBER : 1-800-424-9300

S.A.R.A. INFORMATION

HAZARDS : Acute
PHYSICAL DATA : Pure Solid

SECTION I HAZARDOUS INGREDIENTS

Ingredient Cas Number	MAX % W/W	SARA APPLIES		AIR CONTAMINANT LEVELS			
		312	313	372	TWA/TLV (ppm)	STEL (ppm)	CEIL (ppm)
Citric Acid b-Hydroxytricarballylic Acid (CAS # 77-92-9)	100.0	Y	N	N	PARTICULATES NOT OTHERWISE REGULATED Total TWA 15 mg/m3 OSHA Total TLV 10 mg/m3 ACGIH Respirable TWA 5 mg/m3 OSHA		

SECTION II HEALTH HAZARDS

POTENTIAL EFFECTS OF EXPOSURE

EYES
Eye contact with product may cause severe irritation

SKIN
Skin contact may cause irritation

INHALATION
Inhalation may cause irritation

INGESTION
No hazard expected by this route in normal use.

TARGET ORGANS
OVEREXPOSURE MAY CAUSE DAMAGE TO,
DISORDERS OF, OR ADVERSELY AFFECT THE FOLLOWING SYSTEMS, FUNCTIONS, ORGANS: none currently

Continued On Page 2

For Jungbum Park or Lohman

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 2

PRODUCT NAME : CITRIC ACID ANHYDROUS USP
PRODUCT CODE : 20806

Date: 10-JAN-2003 13:14:39.20

50# BAG-GR

(CONTINUED)

SECTION II HEALTH HAZARDS

known

FIRST AID

FIRST AID EYES

Immediately flush eyes with plenty of water for at least 15 minutes, while holding eyelids apart to ensure flushing of entire surface. Call a physician.

FIRST AID SKIN

Immediately flush skin with plenty of water for at least 15 minutes, while removing contaminated clothing and shoes. Thoroughly clean clothing and shoes before reuse. Call a physician.

FIRST AID INHALATION

Remove to fresh air. If not breathing give artificial respiration, preferably mouth to mouth. If breathing is difficult give oxygen. Call a physician.

FIRST AID INGESTION

If swallowed, induce vomiting immediately by giving two glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person. Call a physician.

OTHER INFORMATION

ROUTES OF ENTRY

eye contact skin contact inhalation

OVEREXPOSURE MAY AGGRAVATE DISORDERS OF THE

none currently known

SECTION III SPECIAL PROTECTION

PROTECTIVE EQUIPMENT

PROTECTIVE EQUIPMENT EYES

chemical goggles Do Not wear contact lenses when working with chemicals.

PROTECTIVE EQUIPMENT SKIN

impervious gloves

PROTECTIVE EQUIPMENT INHALATION

If exposure limits are exceeded, or if exposure may occur, use a NIOSH/MSHA respirator approved for your conditions of exposure. Refer to the most recent NIOSH publications concerning chemical hazards, or consult your safety equipment supplier. Respiratory protection programs must be in compliance with OSHA requirements in 29 CFR 1910.134. For emergencies, a NIOSH/MSHA approved positive pressure breathing apparatus should be readily available.

VENTILATION REQUIRED:

Mechanical general ventilation is usually adequate. Local mechanical ventilation may be required.

ADDITIONAL PROTECTIVE MEASURES

Safety shower, eye wash fountain, and washing facilities should be readily available.

SECTION IV FIRE & EXPLOSION HAZARD DATA

Flash Point (METHOD): > OR = N/A

Flammable Limits (% Volume in Air) UPPER: N/D LOWER: N/D

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 3

PRODUCT NAME : CITRIC ACID ANHYDROUS USP
PRODUCT CODE : 20806

Date: 10-JAN-2003 13:14:39.64

50# BAG-GRA

SECTION IV FIRE & EXPLOSION HAZARD DATA

(CONTINUED)

HMS Info Health : 1
Fire : 0
React : 0
Special : X

EXTINGUISHING MEDIA

water fog carbon dioxide dry chemical
FIRE FIGHTING PROCEDURES

Prevent human exposure to fire, fumes, smoke, and products of combustion. Evacuate non essential personnel. Firefighters should wear full face, self contained breathing apparatus and impervious protective clothing.

UNUSUAL FIRE & EXPLOSION HAZARDS

none currently known

SECTION V PHYSICAL DATA

Boiling Point: N/D
Freezing Point: 307 deg. F
Specific Gravity (H₂O=1): > OR = 1.5420 @ 68 deg. F
Vapor Pressure (MM HG.): N/D
Vapor Density (AIR=1): N/D
Evaporation Rate (NA =1): N/D
Solubility in Water: 62%
Percent Volatile by Volume: N/D
pH: aqueous approx. > OR = 2.200
Appearance:
SOLID - POWDER, CRYSTAL, FLAKE, GRANULE
TABLET, PRILL, BRIQUETTE, ETC.

Odor :
NIL

SECTION VI REACTIVITY DATA

STABILITY

Stable

INCOMPATIBILITY

organic bases amphoteric metals
HAZARDOUS DECOMPOSITION PRODUCTS
carbon dioxide carbon monoxide Miscellaneous organic compounds, some possibly toxic.
HAZARDOUS POLYMERIZATION
Will not occur

SECTION VII SPILL AND LEAK PROCEDURES

Continued On Page 4

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 4

PRODUCT NAME : CITRIC ACID ANHYDROUS USP
PRODUCT CODE : 20806

Date: 10-JAN-2003 13:14:40.07

50# BAG-GRA

(CONTINUED)

SECTION VII SPILL AND LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
Sweep, shovel, or pick up and return to dry, clean container.
DISPOSAL METHOD

Material that cannot be used or chemically reprocessed should be disposed of at an approved facility in accordance with any applicable regulations under the Resource Conservation and Recovery Act. Dispose of material in accordance with all Federal, State and local regulations. Local regulations may be more stringent than Federal or State.

SECTION VIII

Proper Shipping Name: UNCLASSIFIED

Label Requirements: NONE
Reportable Quantity: None

SECTION IX ADDITIONAL INFORMATION

PRECAUTIONS

Do Not breathe dust. Do Not get in eyes, or on skin. Wash thoroughly after handling. Do not swallow.

HANDLING

ATTENTION: This container hazardous when emptied. Since emptied container contains product residues (vapor or liquid), all labeled hazard precautions must be observed.

STORAGE

Keep container closed when not in use. Keep out of reach of children.

NAME: GENE TURNER

DATE ISSUED: 921230
DATE REVISED: 921230

M/A = NOT APPLICABLE
N/D = NOT DETERMINED
N/E = NOT ESTABLISHED

< = LESS THAN
> = MORE THAN

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Harcros Chemicals Inc
 Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 1

PRODUCT NAME : PPG ACCU-TAB WHITE TABLETS
 PRODUCT CODE : 13879

Date: 12-FEB-2004 09:39:48.81

55# PAIL

CAS #: 007778543

MSDS No. 000382
 Revision No./Date 01 921230
 Detail Number 00148/01

FORMULA: Ca(OCl)2
 CHEM. FAMILY: bleaching agents (oxidizers)
 CHEMICAL NAME AND SYNONYMS:
 Calcium Hypochlorite 60% to 80%;
 FS Generic Chloro Shock; Freestyle Calc Hypochlorite;
 Pittchlor Calcium Hypochlorite; Pittabs Calcium Hypochlorite;
 PPG Calcium Hypochlorite; PPG Calcium Hypochlorite 70%;
 PPG N-200 Calc Hypochlorite; PPG N-101 Calc Hypochlorite;
 Pittabs Calc Hypochlorite; PPG Only 1 Calc Hypochlorite;
 Freestyle Calcium Hypochlorite; FS Calcium Hypochlorite;
 Freestyle Supershock Chlor; Pittchlor; Induchlor;
 Chlormor Giant Tabs; Chlormor 65; Chloro Shock;
 Sustain Calc Hypochlorite; Inductor Calcium Hypochlorite;
 Norwecc Bio-Sanitizer Tablets; Bio-Sanitizer;
 HTH Dry Chlorine Granular; HTH Calcium Hypochlorite;
 MSDS No. 000382 DETAIL No. 00148

SUPPLIERS NAME : Harcros Chemicals Inc.
 5200 Speaker Road
 Kansas City KS 66106-1095

SUPPLIERS PHONE NUMBER : 913-321-3131
 TRANSPORTATION EMERGENCY PHONE NUMBER : 1-800-424-9300

S.A.R.A. INFORMATION

HAZARDS : Acute
 PHYSICAL DATA : Mixture Solid

SECTION I HAZARDOUS INGREDIENTS

Ingredient Cas Number	MAX % w/w	SARA APPLIES		AIR CONTAMINANT LEVELS				
		312	313	372	TWA/TLV (ppm)	STEL (ppm)	CELL (ppm)	SKIN AGENT
Calcium Hypochlorite Calcium Oxychloride (CAS # 7778-54-3)	75.0	Y	N	N				
					INDUSTRY RECOMMENDATION (PPG) 2 mg/m3			

SECTION II HEALTH HAZARDS

Continued On Page 2

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 2

PRODUCT NAME : PPG ACCU-TAB WHITE TABLETS
PRODUCT CODE : 13879

Date: 12-FEB-2004 09:39:49.38

55# PAIL

(CONTINUED)

SECTION II HEALTH HAZARDS

POTENTIAL EFFECTS OF EXPOSURE

EYES

Eye contact with product may cause severe irritation burns blindness

SKIN

Skin contact may cause severe irritation burns tissue destruction

INHALATION

Inhalation may cause severe irritation coughing pain decreased breathing capacity excess fluid retention (pulmonary edema)

INGESTION

Ingestion may cause burns tissue destruction even death

TARGET ORGANS

OVEREXPOSURE MAY CAUSE DAMAGE TO:

eyes respiratory system gastrointestinal tract kidneys liver

FIRST AID

FIRST AID EYES

Immediately flush eyes with plenty of water for at least 15 minutes, while holding eyelids apart to ensure flushing of entire surface. Call a physician.

FIRST AID SKIN

Immediately flush skin with plenty of water for at least 15 minutes, while removing contaminated clothing and shoes. Thoroughly clean clothing and shoes before reuse. Call a physician.

FIRST AID INHALATION

Remove to fresh air. If not breathing give artificial respiration, preferably mouth to mouth. If breathing is difficult give oxygen. Call a physician.

FIRST AID INGESTION

Do not induce vomiting. Rinse mouth with water. Dilute stomach contents by drinking water. If vomiting occurs spontaneously, keep head below hips to prevent breathing vomit into lungs. Call a physician immediately.

OTHER INFORMATION

ROUTES OF ENTRY

eye contact skin contact inhalation ingestion

CARCINOGEN STATUS

No components, present in excess of 0.1% by weight are listed as carcinogens by IARC, NTP, or OSHA.

SECTION III SPECIAL PROTECTION

PROTECTIVE EQUIPMENT

PROTECTIVE EQUIPMENT EYES

chemical goggles Do Not wear contact lenses when working with chemicals.

PROTECTIVE EQUIPMENT SKIN

Continued On Page 3

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 3

PRODUCT NAME : PPG ACCU-TAB WHITE TABLETS
PRODUCT CODE : 13879

Date: 12-FEB-2004 09:39:49.76

55# PAIL

SECTION III SPECIAL PROTECTION (CONTINUED)

impervious gloves rubber apron rubber boots clean body covering clothing
PROTECTIVE EQUIPMENT INHALATION
If exposure limits are exceeded, or if exposure may occur, use a NIOSH/MSHA respirator approved for your conditions of exposure. Refer to the most recent NIOSH publications concerning chemical hazards, or consult your safety equipment supplier. Respiratory protection programs must be in compliance with OSHA requirements in 29 CFR 1910.134. For emergencies, a NIOSH/MSHA approved positive pressure breathing apparatus should be readily available.
VENTILATION REQUIRED:
Adequate ventilation is required to minimize exposure or to maintain exposure levels below OSHA/ACGIH requirements. None normally required.
ADDITIONAL PROTECTIVE MEASURES
Safety shower, eye wash fountain, and washing facilities should be readily available.

SECTION IV FIRE & EXPLOSION HAZARD DATA

Flash Point (METHOD): > OR = N/A
Flammable Limits (% Volume in Air) UPPER: N/D LOWER: N/D

HMS Info Health : 2
Fire : 0
React : 2
Special : X

EXTINGUISHING MEDIA

water
FIRE FIGHTING PROCEDURES
Prevent human exposure to fire, fumes, smoke, and products of combustion. Evacuate non essential personnel. Firefighters should wear full face, self contained breathing apparatus and impervious protective clothing.
UNUSUAL FIRE & EXPLOSION HAZARDS
Product does not burn, but can provide oxygen which can intensify a fire. Intense heat may cause pressure buildup and rupture container. Product is an oxidizer. It may react vigorously with organics or other materials resulting in an explosion and fire.

SECTION V PHYSICAL DATA

Boiling Point: N/D
Freezing Point: N/D
Specific Gravity (H(2)O=1): N/D
Vapor Pressure (MM HG.): N/D

Continued On Page 4

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 4

PRODUCT NAME : PPG ACCU-TAB WHITE TABLETS
PRODUCT CODE : 13879

Date: 12-FEB-2004 09:39:50.16

55# PAIL

SECTION V PHYSICAL DATA

(CONTINUED)

Vapor Density (AIR=1) : N/D
Evaporation Rate (NA) =1) : N/D
Solubility in Water: 17%
Percent Volatile by Volume: N/D
pH: aqueous approx. > OR = 8.000
Appearance:
SOLID ~ POWDER, CRYSTAL, FLAKE, GRANULE
TABLET, PILL, BRIQUETTE, ETC.
Odor :
SHARP

SECTION VI REACTIVITY DATA

STABILITY
Unstable.
INCOMPATIBILITY
inorganic acids organic mixtures Avoid contact with strong reducing agents which include hydrogen, hydrazine, sulfides, sulfites, and nitrites. Product is an oxidizer. It may react vigorously with organics or other materials resulting in an explosion and fire.
CONDITIONS TO AVOID
Heat, heated surfaces, static electricity, electric arcs, sparks and flames.
HAZARDOUS POLYMERIZATION
Will not occur

SECTION VII SPILL AND LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
Sweep, shovel, or pick up and return to dry, clean container. Flush spill area with water. In Case Of Spills: Neutralize, contain, and dispose of in accordance with Federal, State and local regulations.

DISPOSAL METHOD

Material that cannot be used or chemically reprocessed should be disposed of at an approved facility in accordance with any applicable regulations under the Resource Conservation and Recovery Act. Dispose of material in accordance with all Federal, State and local regulations. Local regulations may be more stringent than Federal or State.

SECTION VIII

Proper Shipping Name: CALCIUM HYPOCHLORITE HYDRATED

Continued On Page 5

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 5

PRODUCT NAME : PPG ACCU-TAB WHITE TABLETS
PRODUCT CODE : L3879

Date: 12-FEB-2004 09:39:50.50

55# PAIL

(CONTINUED)

SECTION VIII

Hazard Class: 5.1, UN2880, PGII
Label Requirements: OXIDIZER
Reportable Quantity: All shipments are reportable

SECTION IX ADDITIONAL INFORMATION

PRECAUTIONS
Do Not get in eyes, on skin, or clothing. Keep from contact with clothing or other combustible materials. Do not swallow.

HANDLING

Keep heat, lights, fire, and sparks away. ATTENTION: This container hazardous when emptied. Since emptied container contains product residues (vapor or liquid), all labeled hazard precautions must be observed.

STORAGE

Keep container closed when not in use. Store in a cool dry place. Keep out of reach of children.

SECTION X COMPLIANCE INFORMATION

TSCA INVENTORY STATUS :
Listed

NAME: GENE TURNER

DATE ISSUED: 921230
DATE REVISED: 921230
UNK = UNKNOWN

N/A = NOT APPLICABLE
N/D = NOT DETERMINED
N/E = NOT ESTABLISHED

< = LESS THAN
> = MORE THAN

The information provided in this Material Safety data sheet has been obtained from sources believed to be reliable. Harcros Chemicals Inc provides no warranties, either expressed or implied and assumes no responsibility for the accuracy or completeness of the data contained herein. This information is offered for your information, consideration, and investigation. You should satisfy yourself that you have all current data relevant to your particular use. Harcros Chemicals Inc knows of no medical condition, other than those noted on this material safety data sheet, which are generally recognized as being aggravated by exposure to this product.

ADDENDUM #1/FORMAL QUOTATION NO.: Q-040024
LEE COUNTY, FLORIDA
PROPOSAL QUOTE FORM
FOR THE ANNUAL PURCHASE OF
CHEMICALS FOR UTILITIES

ATTACHMENT 5

DATE SUBMITTED: 12-15-03

VENDOR NAME: The Dument Company, Inc.

TO: The Board of County Commissioners
Lee County
Fort Myers, Florida

Having carefully examined the "General Conditions", and the "Detailed Specifications", all of which are contained herein, the Undersigned proposes to furnish the following which meet these specifications:

The undersigned acknowledges receipt of Addenda numbers:

1

GRAND TOTAL (ALL SECTIONS): \$ DID NOT BID ALL ITEMS

WILL YOU DELIVER WITH YOUR OWN VEHICLE AS OPPOSED TO COMMON CARRIER?

YES X NO _____

SECTION 1, ANHYDROUS AMMONIA

Specify product name: _____

\$ _____ EA. X 60.6 tons = Total Cost \$ N/B

SECTION 1A, ANHYDROUS AMMONIA

Specify product name: TANKER TANKS ANHYDROUS AMMONIA

\$ 172.00 EA. X 4 (150# cylinders) = Total Cost \$ 688.00

MINIMUM ORDER QUANTITY: 1

SECTION 2, ANIONIC POLYMERS

Specify product name: _____

\$ _____ EA. X 24,000 lbs = Total Cost \$ NB

Manufacturer _____ PolyFloc AP 1100P, or equal

MINIMUM ORDER QUANTITY: _____

SECTION 3, AQUA AMMONIA 18%

Specify product name: TANNER INNES - 18% AQUA AMMONIA

\$ 1.48 EA. X 8,000 gallons = Total Cost \$ 11,840.00

Manufacturer TANNER INNES

MINIMUM ORDER QUANTITY: 1-TOTE

SECTION 4, BENTONITE CLAY ACCUFLOC SDG

Specify product name: _____

\$ _____ EA. X 500 lbs = Total Cost \$ NB

MINIMUM ORDER QUANTITY: _____

SECTION 5, CALCIUM HYPOCHLORITE 3 inch stabilized tablets

Specify product name: ALCO CHEMICAL

\$ 82.00 EA. X ^{48 50#} 24 (100# pails) = Total Cost \$ 3,936.00

MINIMUM ORDER QUANTITY: 1

SECTION 6, CITRIC ACID

Specify product name: HARRIS & FIND

\$.98 EA. X 500 lbs = Total Cost \$ 490.00

MINIMUM ORDER QUANTITY: 5

SECTION 7, HYDRATED LIME

Specify product name: CHENEY LIME

\$ 5.15 EA. X 6,480 (50# bags) = Total Cost \$ 33,372.00

MINIMUM ORDER QUANTITY: 45 BAGS

SECTION 8, HYDROCHLORIC ACID 31% (muriatic acid)

Specify product name: MURIATIC - 31%

\$ 1.95 EA. X 4,800 gallons (275 gal. totes) = Total Cost \$ 9,360.00

Manufacturer BROWNTAG

MINIMUM - 1 TOTE

SECTION 8A, HYDROCHLORIC ACID 31% (muriatic acid)

Specify product name: MURIATIC - 31%

\$ 2.25 EA. X 420 gallons (15 gal. carboys) = Total Cost \$ 945.00

Manufacturer BROWNTAG

MINIMUM - 30 CARBOYS

SECTION 8B, HYDROCHLORIC ACID 31% (muriatic acid)

Specify product name: MURIATIC - 31%

\$ 2.75 EA. X 244 gallons (1 gal. jugs) = Total Cost \$ 671.00

Manufacturer BROWNTAG

MINIMUM ORDER QUANTITY: 40 GALLONS

SECTION 9, HYDROFLUOSILIC ACID 23%

Specify product name: _____

\$ _____ EA. X 13,000 gallons = Total Cost \$ N/B

Specify product name : _____

MINIMUM ORDER QUANTITY: _____

SECTION 9A, HYDROFLUOSILIC ACID 23%

Specify product name: LCF, LTD.

\$ 398.75 EA. X 15 (275 gal. Totes) = Total Cost \$ 5,981.25

Specify product name : _____

SECTION 10, POLYMER (LIQUID)

Specify product name: _____

\$ _____ EA. X 2,000 lbs = Total Cost \$ N/B

MINIMUM ORDER QUANTITY: _____

SECTION 11, POTASSIUM PERMANGANATE

Specify product name: UMC

\$ 2.95 EA. X 2,000 lbs = Total Cost \$ 5,900.00

MINIMUM ORDER QUANTITY: 2-55# PAILS

SECTION 12, PYRO-PHOSPHATE

Specify product name _____

\$ _____ EA. X 18,000 lbs = Total Cost \$ NO BIDS

MINIMUM ORDER QUANTITY: _____

SECTION 13, SODA ASH

Specify product name: SODA ASH-LITE

\$ 14.50 EA. X 98 (50# bags) = Total Cost \$ 1,421.00

MINIMUM ORDER QUANTITY: 10 BAGS

SECTION 13A, SODA ASH

Specify product name: _____

\$ _____ EA. X 200 tons = Total Cost \$ N/B

MINIMUM ORDER QUANTITY: _____

SECTION 14, SODIUM HYPOCHLORITE SOLUTION

Specify product name: ODYSSEY-ULTRA CHLOR

\$.98 EA. X 450,000 gallons = Total Cost \$ 441,000.00

MINIMUM ORDER QUANTITY: 100 gallons

SECTION 14A, SODIUM HYPOCHLORITE SOLUTION

Specify product name: ODYSSEY-ULTRA CHLOR

\$ 60.50 EA. X 20 (55 gal. drums) = Total Cost \$ 1,210.00

MINIMUM ORDER QUANTITY: 2-DRUMS

SECTION 15, SODIUM METABISULFITE

Specify product name: _____

\$ _____ EA. X 500 (50# bags) = Total Cost \$ N/B

MINIMUM ORDER QUANTITY: _____

SECTION 16, ZINC ORTHO- PHOSPHATE

Specify product name: SWEETWATER CP824

\$.65 EA. X 49,000 lbs = Total Cost \$ 31,850.00

MINIMUM ORDER QUANTITY: 1-TOTE

TO BE STARTED WITHIN 7 CALENDAR DAYS AFTER RECEIPT OF AWARD AND PURCHASE ORDER.

Is your firm interested in being considered for the Local Vendor Preference?

Yes X No _____

If yes, then read the paragraph entitled "Local Vendor Preference" included in these specifications. Also complete the Local Vendor Preference Questionnaire and return with your quotation.

Quoters should carefully read all the terms and conditions of the specifications. Any representation of deviation or modification to the quote may be grounds to reject the quote.

Are there any modifications to the quote or specifications:

Yes _____ No X

Failure to clearly identify any modifications in the space below or on a separate page may be grounds for the quoter being declared nonresponsive or to have the award of the quote rescinded by the County.

MODIFICATIONS:

Quoter shall submit his/her quote on the County's Proposal Quote Form, including the firm name and authorized signature. Any blank spaces on the Proposal Quote Form, qualifying notes or exceptions, counter offers, lack of required submittals, or signatures, on County's Form may result in the Quoter/Quote being declared non-responsive by the County.

ANTI-COLLUSION STATEMENT

THE BELOW SIGNED QUOTER HAS NOT DIVULGED TO, DISCUSSED OR COMPARED HIS QUOTE WITH OTHER QUOTERS AND HAS NOT COLLUDED WITH ANY OTHER QUOTER OR PARTIES TO A QUOTE WHATSOEVER. NOTE: NO PREMIUMS, REBATES OR GRATUITIES TO ANY EMPLOYEE OR AGENT ARE PERMITTED EITHER WITH, PRIOR TO, OR AFTER ANY DELIVERY OF MATERIALS. ANY SUCH VIOLATION WILL RESULT IN THE CANCELLATION AND/OR RETURN OF MATERIAL (AS APPLICABLE) AND THE REMOVAL FROM THE MASTER BIDDERS LIST.

FIRM NAME THE Dumont Company, Inc.
BY (Printed): RONALD H. CARTWRIGHT
BY (Signature): Ronald H. Cartwright
TITLE: PRESIDENT
FEDERAL ID # OR S.S.# 65-0436122
ADDRESS: 812 EYRIE DR.
OWIEDA, FL 32765
PHONE NO.: 800-330-1369
FAX NO.: 800-524-9315
CELLULAR PHONE/PAGER NO.: 407-509-4061

LBE COUNTY OCCUPATIONAL LICENSE NUMBER: _____
E-MAIL ADDRESS: Ron. CARTWRIGHT @ DumontChemicals.com
REVISED: 7/28/00

ADDENDUM #1/FORMAL QUOTATION NO.: Q-040024
ATTACHMENT A
LOCAL VENDOR PREFERENCE QUESTIONNAIRE
(LEE COUNTY ORDINANCE NO. 00-10)

Instructions: Please complete either Part A or B whichever is applicable to your firm

PART A: VENDOR'S PRINCIPAL PLACE OF BUSINESS IS LOCATED WITHIN LEE COUNTY (Only complete Part A if your principal place of business is located within the boundaries of Lee County)

1. What is the physical location of your principal place of business that is located within the boundaries of Lee County, Florida?

2. What is the size of this facility (i.e. sales area size, warehouse, storage yard, etc.)

PART B: VENDOR'S PRINCIPAL PLACE OF BUSINESS IS NOT LOCATED WITHIN LEE COUNTY OR DOES NOT HAVE A PHYSICAL LOCATION WITHIN LEE COUNTY (Please complete this section.)

1. How many employees are available to service this contract? 15
TWO, INCLUDING REGIONAL MANAGER, LIVE IN LEE COUNTY

2. Describe the types and amount of equipment you have available to service this contract.

2- FORK LIFT TRUCKS 1- TRACTOR TRAILER
5- SINGLE + DUAL AXLE FLATBEDS

3. Describe the types and amount of material stock that you have available to service this contract.

OVER \$100,000 IN INVENTORY AT OUR LABELLED
WAREHOUSE NAME-

4. Have you provided goods or services to Lee County on a regular basis for the preceding, consecutive five years?

Yes X No _____

If yes, please provide your contractual history with Lee County for the past five, consecutive years. Attach additional pages if necessary.

25% Caustic, HFS, Muriatic Acid,
150# GAS CYLINDERS, LIME -
24 HOUR EMERGENCY SERVICE ON ALL ITEMS
FROM OUR LABELLE WAREHOUSE -

ADDENDUM #1/FORMAL QUOTATION NO.: Q-040024
LEE COUNTY PURCHASING - BIDDERS CHECK LIST

IMPORTANT: Please read carefully and return with your bid proposal.
Please check off each of the following items as the necessary action is completed:

1. The Quote has been signed.
2. The Quote prices offered have been reviewed.
3. The price extensions and totals have been checked.
4. The original (must be manually signed) and 2 copies of the quote have been submitted.
5. Three (3) identical sets of descriptive literature, brochures and/or data (if required) have been submitted under separate cover.
6. All modifications have been acknowledged in the space provided.
7. All addendums issued, if any, have been acknowledged in the space provided.
8. Erasures or other changes made to the quote document have been initialed by the person signing the quote.
9. Bid Bond and/or certified Check, (if required) have been submitted with the quote in amounts indicated.
10. Any Delivery information required is included.
11. The mailing envelope has been addressed to:

MAILING ADDRESS	PHYSICAL ADDRESS
Lee County Purchasing	Lee County Purchasing
P.O. Box 398	1825 HENDRY STREET, 3 RD FLOOR
or	Ft. Myers, FL 33901
Ft. Myers, FL 33902-0398	
12. The mailing envelope MUST be sealed and marked with:
Quote Number _____
Opening Date and/or Receiving Date _____
13. The quote will be mailed or delivered in time to be received no later than the specified opening date and time. (Otherwise quote cannot be considered or accepted.)
14. If submitting a "NO BID" please write quote number here _____ and check one of the following:
 Do not offer this product Insufficient time to respond.
 Unable to meet specifications (why) _____
 Unable to meet bond or insurance requirement.
Other: _____

Company Name and Address:

DUMONT

December 15, 2003

Lee County
Division of Purchasing
Ms. Chevone Peterson, Buyer
1825 Hendry Street, 3rd Floor
Ft Myers, FL 33901

Dear Ms. Peterson,

Enclosed are all required attachments as relates to the products bid.

We have had no accidents, incidents, releases, spills or National Response Center notifications for any chemicals that we deliver or manufacture for the past five years. Further, we have never had a contract terminated due to poor service or other related issues.

Ten references that use our sodium hypochlorite:

City of Deltona
Jim Smith, Chief Operator
386-574-6691

City of Lake Helen
Rick Mullen
386-228-2885

Utilities, Inc.
Scotty Haws
407-869-1919

Walt Disney World
Tiana Campbell
407-938-2053

Two Fold Water
Rick Teasdale
352-475-2248

City of Trenton
Ken Corbin
352-463-4000

Toho Water Authority
Tim Gregory
407-518-2255

Suwanee Water and Sewer Dist.
Matt Straigis
352-542-7570

ST Environmental
Bob Dick
941-925-3088

South Martin Regional Utility
Tony Cappa
772-546-2571

We will provide training sessions as specified when required.

We have a complete fleet of trucks to safely handle all chemicals including a fork lift truck for handling large pallets and totes.

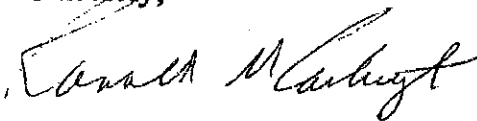
We certify that all products that we are furnishing for use in a drinking water facility meet all the requirements of ANSI/NSF Standard 60 for Drinking Water as mandated by the state of Florida in the Florida Administrative Code 62-555.320.

All requirements for sodium hypochlorite have been submitted by my vendor Odyssey Manufacturing under separate cover.

Further information or sample quantities will be made available as required.

We appreciate the opportunity to make this proposal.

Sincerely,



Ronald H. Cartwright
President

CHENEY LIME & CEMENT COMPANY
MANUFACTURERS
ALLGOOD, ALABAMA 35013

PLANTS GRAYSTONE ALABAMA
LANDMARK, ALABAMA

PHONE (205) 625-3031 ONEONTA, AL
FAX (205) 625-3032 ALLGOOD, ALABAMA

High Calcium

Hydrated Lime

Typical Chemical Analysis

Chemical Name	Formula	Normal Range
Calcium Hydroxide	Ca(OH) ₂	94.6 – 96.0 %
Calcium Oxide (Total)	CaO	71.6 – 72.8 %
Calcium Oxide (Available)	CaO	70.6 – 71.8 %
Magnesium Oxide	MgO	1.00 – 2.50 %
Silicon Dioxide	SiO ₂	0.34 – 0.86 %
Iron & Aluminum Oxides	R ₂ O ₃	0.84 – 1.46 %
Loss on Ignition	L.O.I.	22.70 – 23.10%
Passing 325 Sieve	325 Sieve	80.0 – 90.0 %

Packaging & Transportation

Bulk Pneumatic Truck
50 lb. Bags Flatbed or Van
10 lb. Bags Flatbed or Van

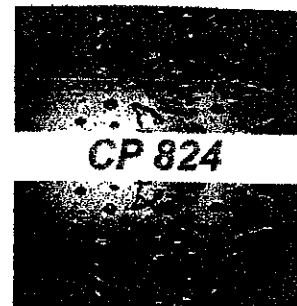
Bulk Density for hydrated lime is 25.00 – 35.00 lbs/cu.ft.

Chemical analyses performed using the American Society for Testing and Materials Standard
ASTM C-25

cheneylime.com

SWEETWATER

- Higher phosphate concentrations for reduced lead & copper corrosion rates
- Eliminates costly leaks due to corrosion
- Reduces or eliminates the need for pH adjustment
- Eliminates unsightly red water complaints
- Reduces overall treatment costs
- Lowers THM's by maintaining a lower pH environment
- Saves energy costs by maintaining a clean, non-corroded distribution system



Principal Uses

Sweetwater CP 824 is a liquid zinc orthophosphate corrosion inhibitor used in the protection of potable water conduits in the transmission of public water supplies. CP 824 has been specifically formulated to provide a balanced ratio of zinc to orthophosphate for a wide range of corrosion inhibition needs. When used without pH adjusters such as caustic soda or lime, CP 824 can help reduce THM formation rates as THM's are produced at a retarded rate at a lower pH.

General Description

Form	Liquid
% Zn.	8.0
Density	11.01 lbs./Gallon
Color	Clear
Odor	Slight
% PO4	24
pH	<2.0

Typical Dosage Rates

Pacification	9 - 25 ppm
Maintenance	5 - 15 ppm

Feeding

Sweetwater CP 824 is best fed as a neat solution directly from the drum or bulk storage tank. Pumps should be selected to handle a dosage within the typical feed rates identified above. As material is acidic, care should be taken to insure that all wetted pump parts and feed lines can withstand an acidic environment.

Handling and Storage

Sweetwater CP 824 is an acidic material and should be treated as any other acid. Avoid contact with skin or eyes and wash affected area immediately if contact is made. If irritation persists call a physician. Do not take internally.

Sweetwater CP 824 can be stored in unopened containers for extended periods of time. Bulk CP 824 should be stored in lined steel, Fiberglas or cross linked polypropylene tanks. As C-824 is an acidic material, all contacted storage tanks or feed pumps should be engineered to withstand an acidic environment.

Shipping

Sweetwater CP 824 is available in either drum or bulk quantities from various locations around the United States.

This product bulletin has been provided to you for reference purposes only. For further information on Sweetwater products or services please contact your local Sweetwater representative or Sweetwater national headquarters at the following address:

Sweetwater Technologies

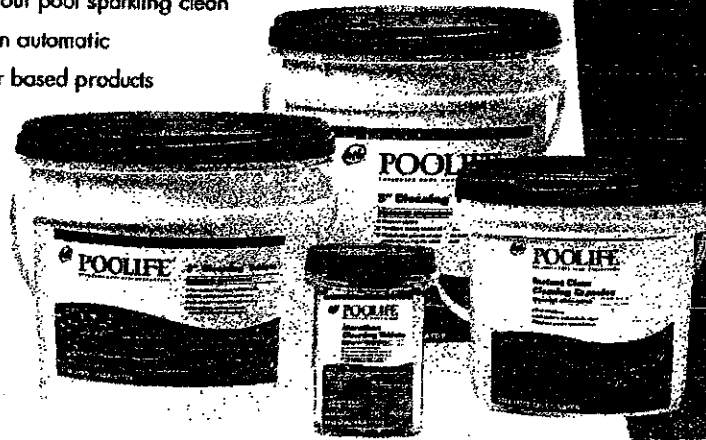
A Division of National Sweetwater, Inc.
P.O. Box 1473, Temecula, CA 92593
800) 426-2428 FAX (931) 540-1338



PRODUCT/PACKAGE INFORMATION

HTH® POOLIFE™ STABILIZED CHLORINATORS ORANGE

POOLIFE™ stabilized chlorinators help keep your pool sparkling clean with 3" tablets, 1" tablets and sticks for use in automatic chlorinators, feeders or floaters. These trichlor based products dissolve slowly for continuous chlorination to last up to four days – depending on water conditions and pump run time. Granular stabilized products (HTH® POOLIFE™ Instant Clear Cleaning Granules™) keep your pool clean and dissolve instantly for quick results. Stabilized chlorinators are sun protected to extend the life of the chlorine in the pool.



HTH® POOLIFE™ 3" Cleaning Tablets™

- Simple, Easy and Convenient
- Sun Resistant for Extended Chlorine Life
- Individually Wrapped for Safe and Easy Handling
- Totally Soluble and Can Last 3 to 4 Days for Continuous Chlorination



SKU NUMBER	PRODUCT AND PACKAGE	UNIT NET WEIGHT (LBS.)	UNIT WIDTH (INCHES)	POUNDS/ CUBIC FEET	UNIT UPC CODES
42109	3" Cleaning Tablets	2 x 48 x 0.375 lb.	16.00	41.14	073187421098
42107	3" Cleaning Tablets	6 x 4.8125 lb.	18.125	27.03	073187421074
42119	3" Cleaning Tablets	9.625	8.50	43.77	073187421197
42106	3" Cleaning Tablets Wrapped	25	12.58	26.32	073187421067
42116	3" Cleaning Tablets Unwrapped	25	12.58	26.32	073187421166
42108	3" Cleaning Tablets Wrapped	50	12.58	42.29	073187421081
42118	3" Cleaning Tablets Unwrapped	50	12.58	42.29	073187421180

HTH® POOLIFE™ 1" Cleaning Tablets™

- Dissolves Slowly for Continuous Chlorination
- Designed for Use in Skimmers, Floaters and Automatic Chlorinators
- Simple, Easy and Convenient
- Sun Resistant for Extended Chlorine Life

SKU NUMBER	PRODUCT AND PACKAGE	UNIT NET WEIGHT (LBS.)	UNIT WIDTH (INCHES)	POUNDS/ CUBIC FEET	UNIT UPC CODES
42104	1" Cleaning Tablets	6 x 5 lb.	14.63	31.35	073187421043
42103	1" Cleaning Tablets	20	12.58	28.43	073187421036
42105	1" Cleaning Tablets	50	12.58	42.29	073187421051

All product images shown on this page are available on the HTH® POOLIFE™ Photo Collection Disk. These images are to be used solely for the purposes of advertising HTH® POOLIFE™ products. Any alteration of the images or use for other than advertising HTH® POOLIFE™ products without prior written consent from the Arch Chemicals Marketing Department is expressly prohibited. If you have any questions, please contact Deanna King at (770) 970-4032.

The HTH and POOLIFE logos and POOLIFE are trademarks of Arch Chemicals, Inc. HTH is a registered trademark of Arch Chemicals, Inc. 2003A1.2/02

TECHNICAL INFORMATION

POTASSIUM PERMANGANATE

FREE FLOWING

Meets AWWA Standard B603-93

SPECIFICATIONS:

	AWWA Standard Specifications	Typical Analysis
KMnO ₄ content	97% Min.	98.15%
Cadmium	100 ppm	<5 ppm
Chromium	500 ppm	<20 ppm
Mercury	20 ppm	<0.5 ppm
Pour test		passes

Anticaking agent

Silicon dioxide

Particle size distribution

Retained on 0.425 mm sieve	6.45%
Passed through 0.075 mm sieve	2.25%
Type	Crystals

PACKING: 25 kg, 50 kg or 150 kg net polyethylene lined fully open head metal drums

COUNTRY OF ORIGIN: Czech Republic

The information herein is believed to be reliable and is to assist customers in determining whether our products are suitable for their applications. However, no warranty, express or implied is made as to its accuracy or completeness and none is made as to fitness of this material for any purpose. Our products are intended for sale to industrial and commercial customers. We request that customers inspect and test our products before use and satisfy themselves as to contents and suitability. Nothing herein shall constitute any other warranty express or implied, including any warranty of merchantability or fitness nor of protection from any law or patent to be inferred. All patent rights are reserved. The exclusive remedy for all proven claims is replacement of our materials and in no event shall we be liable for special, incidental or consequential damages. We shall not be liable for damages to person or property resulting from its use. Consult the Material Safety Data Sheet for additional information.

04 JAN 12 PM 3:06

DUMONT

January 9, 2004

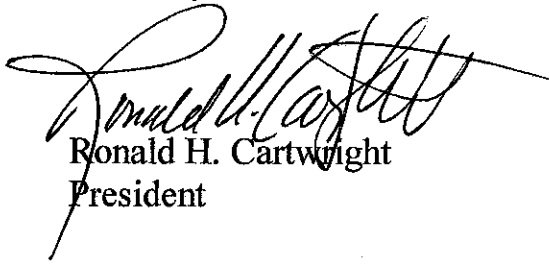
Ms. Chevone Peterson
Purchasing Department
1825 Hendry St., 3rd Floor
Fort Myers, FL 33901

Dear Ms. Peterson,

Attached is the information regarding the Sodium Hypochlorite that we proposed in our response to your bid Q-040024. We did not include the information since we are an Odyssey Manufacturing distributor and we understood that they would be furnishing the required data.

I hope this includes all the documents you require. If you have any other questions, please give me a call.

Sincerely,



Ronald H. Cartwright
President

NovaChem

Laboratories, Inc

Date: 7 July 2003

Call for results over the phone
513-523-3605

Analysis Results

Company: Odyssey Manufacturing Co
Pat Allman
Fax: 813-630-2589

Sample: Bleach, 6/27
Date Received: 7/1
Date Analyzed: 7/1,7

NOTE:

Trade Percent Calculations

$(\text{Weight } \%)(\text{Specific Gravity})$

$$= \frac{\quad}{1.05}$$
$$= \frac{(11.14)(1.163)}{1.05} = \underline{\underline{12.34}}$$

Parameter	Sample
Wt% NaOCl	11.14
Wt% Available Chlorine	
Wt% NaOH	0.213
Calculated pH	12.8
Wt% Na ₂ CO ₃	0.118
Specific Gravity	1.163
ClO ₃ ⁻ , mg/L	1,022
BrO ₃ ⁻ , mg/L	10
Fe, mg/L	<0.05
Cu, mg/L	<0.02
Ni, mg/L	<0.02
Filter Test (1,000 mL)	1 min 28 sec

5172 College Corner Pike, P.O. Box 638, Oxford, Ohio 45056
Tel: 513-523-3605, FAX: 513-523-4025
E-Mail: bbubnis@brecnet.com



ODYSSEY
MANUFACTURING CO.

MATERIAL SAFETY DATA SHEET

REVISED 7/2/00

SECTION I CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

ODYSSEY MANUFACTURING CO.
1484 Massaro Boulevard
Tampa, Florida 33619
1-813-635-0339

EMERGENCY RESPONSE NUMBER:
1-800-ODYSSEY (FLORIDA)
1-813-635-0339 (24 hours)

SUBSTANCE: SODIUM HYPOCHLORITE

TRADE NAME: Ultra-CHLOR

CHEMICAL NAME/SYNONYMS: Sodium Hypochlorite Solution, Bleach Solution, Bleach Liquor, Hypo-
solution, Bleach, and Liquid Bleach.

CAS NUMBER: 7681-52-9

CHEMICAL FAMILY: Alkali

FORMULA: NaOCl

DOT PROPER SHIPPING NAME: Hypochlorite Solution

DOT HAZARD CLASS: 8 (Corrosive) PG III; PG II (For solutions greater than 16% available chlorine)

DOT IDENTIFICATION NO: UN1791

RQ: 100 pounds

DOT EMERGENCY GUIDE NO: 154

SECTION II COMPOSITION, INFORMATION ON INGREDIENTS

INGREDIENT(S):

Sodium Hypochlorite (NaOCl)	10.0 - 20.0% wt
Sodium Hydroxide (NaOH)	0.1 - 0.4% wt
Water (H ₂ O)	79.7 - 89.9% wt

SECTION III HAZARDS IDENTIFICATION

NFPA CLASSIFICATION (SCALE 0-4): Health=2 Fire=0 Reactivity=1

EC CLASSIFICATION (ASSIGNED): C (Corrosive)

EMERGENCY OVERVIEW

COLOR: Yellow

PHYSICAL FORM: Liquid

ODOR: Chlorine Odor

MAJOR HEALTH HAZARDS: Respiratory Tract Burns, Skin Burns, Mucous Membrane Burns, and Eye Irritation
HAZARDOUS MIXTURES WITH OTHER LIQUIDS, SOLIDS, OR GASES: Reacts violently with acids
liberating chlorine gas. Also reacts with organic substance. When heated, gives off oxygen that may increase fire
hazard.

POTENTIAL HEALTH EFFECTS

INHALATION:

- **SHORT TERM EXPOSURE:** Irritation to respiratory tract. May have same as effects reported in other routes of exposure, burns, blisters, nausea, difficulty breathing, and lung congestion.
- **LONG TERM EXPOSURE:** Same as effects reported in short term exposure.

SKIN CONTACT:

- **SHORT TERM EXPOSURE:** Irritant, reddening of the skin. May have burns, blisters, and itching
- **LONG TERM EXPOSURE:** Same as effects reported in short term exposure.

EYE CONTACT:

- **SHORT TERM EXPOSURE:** Irritation (possibly severe), possible eye damage
- **LONG TERM EXPOSURE:** Same as effects reported in short term exposure.

INGESTION:

- **SHORT TERM EXPOSURE:** Burns, vomiting stomach pain, disorientation, bluish skin color, convulsions, coma
- **LONG TERM EXPOSURE:** Same as effects reported in short term exposure.

CARCINOGEN STATUS

OSHA: N

NTP: N

IARC: N

SECTION IV FIRST AID MEASURES

INHALATION: Remove from exposure and get fresh air. Use a bag valve mask or similar device to perform artificial respiration (rescue breathing) if needed. Keep warm and at rest. Get medical attention immediately if artificial respiration is required.

SKIN CONTACT: Remove contaminated clothing, jewelry, and shoes immediately. Flush affected area with large amounts of water, preferably a safety shower. Use soap or mild detergent and large amounts of water until no evidence of chemical remains (at least 15-20 minutes). For burns, cover affected area securely with sterile, dry, loose fitting dressing. If skin is burned, get medical attention immediately.

EYE CONTACT: Wash eyes immediately with large amounts of water, occasionally lifting upper and lower lids, until no evidence of chemical remains (at least 15 minutes). Continue irrigating with a normal saline solution until ready to transport to physician. Cover with sterile bandages. Get medical attention immediately.

INGESTION: Rinse mouth with water. Drink large quantities of milk (water if no milk is available). Milk of magnesia may be helpful. **DO NOT USE ACIDIC ANTIDOTES SUCH AS SODIUM BICARBONATE.** When vomiting occurs, keep head lower than hips to help prevent aspiration. If person is unconscious, do not induce vomiting and turn their head to the side. Never make an unconscious person vomit or drink fluids. Get medical attention.

NOTE TO PHYSICIAN: For inhalation, consider oxygen. For ingestion, avoid gastric lavage, emesis, sodium bicarbonate and acid solutions. Consider the use of antacids.

SECTION V FIRE FIGHTING MEASURES

FLASH POINT: Non-flammable

FLAMMABLE LIMITS: Non-flammable

FIRE AND EXPLOSION HAZARDS: Negligible fire hazard. Oxidizer. This material will react with some metals and cause liberation of oxygen. May ignite or explode on contact with combustible materials. Toxic fumes can be liberated by contact with acid or heat.

EXTINGUISHING MEDIA: Regular dry chemical, carbon dioxide, water, or foam suitable for surrounding fire.

For large fires, use regular foam or flood with fine water spray.

FIRE FIGHTING: Wear self-contained breathing apparatus and full protective clothing. Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. Use extinguishing agents appropriate for surrounding fire. Do not get water directly on material. For large fires, flood with fine water spray. Reduce vapors with water spray. Apply water from a protected location or from a safe distance. Avoid body contact or inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

SECTION VI ACCIDENTAL RELEASE MEASURES

OCCUPATIONAL RELEASE: Do not touch spilled material. Stop leak if possible without personal risk. For small spills, collect spilled material in appropriate container for disposal and consider absorbing with sand or other non-combustible material (e.g., do not use sawdust or other combustible material). Be advised, however, that the use of absorbing material is creating hazardous waste and this absorbing material must now be disposed of properly. Collect spilled material in appropriate container for disposal. For small dry spills, move containers away from spill to a safe area. For large spills, dike for later disposal. If possible, do not allow material to enter sewers, streams, ponds or storm conduits as concentrated solutions will seriously injure aquatic life. Keep unnecessary people away, isolate hazard area and deny entry. Contain in as small an area as possible, such as a holding area for dilution and neutralization. Contain spill in plastic drums when available. Dispose of in accordance with Federal, State, and local regulations. Personnel engaged in cleanup operations must be equipped with NIOSH approved respirator protection, rubber boots, gloves, and clothing to avoid body contact. Reportable Quantity (RQ): 100 pounds. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800) 424-8802 (USA) or (202) 426-2675 (USA).

ADVANCE PLANNING: Plan in advance for an occupational release and have necessary equipment and neutralization agents on-site. Contact Odyssey Manufacturing for assistance.

SECTION VII HANDLING AND STORAGE

Store in vented, closed containers that provide protection from direct sunlight. Keep separated from incompatible substances and do not store near acids, heat, or oxidizable materials or organics. When handling, do not mix with other cleaning agents that may liberate chlorine gas vapors (e.g., acidic agents).

Store and handle in accordance with all current regulations and standards including NFPA 430 Code for the Storage of Liquid and Oxidizing Materials.

SECTION VIII EXPOSURE CONTROLS AND PERSONNEL PROTECTION

EXPOSURE LIMITS: 2 mg/m³ AIHA recommended STEL 15 minute(s) for Sodium Hypochlorite

VENTILATION: Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

EYE PROTECTION: Splash goggles are preferred to a faceshield. Another option is to wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: It is recommended to wear appropriate chemical resistant clothing to avoid body contact such as a rubber apron or rain suit. Boots are preferred for footwear.

GLOVES: Wear appropriate chemical resistant gloves.

RESPIRATOR: Under conditions of frequent use or heavy exposure, respiratory protection may be needed.

Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.

- Any chemical cartridge respirator with organic vapor cartridge(s).
- Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s)
- Any air-purifying respirator with a full facepiece and an organic vapor canister
- Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply (Use for Unknown Concentrations or those that may be Immediately Dangerous to Life or Health)
- Any self-contained breathing apparatus with a full facepiece (Use for High Concentrations or those which are immediately Dangerous to Life or Health)

SECTION IX PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL APPEARANCE: Liquid

APPEARANCE AND ODOR: Clear - Chlorine odor like household bleach.

COLOR: Greenish - Yellowish cast

MOLECULAR WEIGHT: 74.44

MOLECULAR FORMULA: Na-O-Cl

BOILING POINT: Degrades at 230 Degrees Fahrenheit
 FREEZING POINT: 7 Degrees Fahrenheit
 SPECIFIC GRAVITY: 1.15 - 1.17 at 60 Degrees Fahrenheit
 PH: Approximately 11 - 13
 VAPOR PRESSURE (mm HG): Vapor Pressure of water + decomposition product Vapor Pressure
 VAPOR DENSITY: Not Available
 SOLUBILITY IN WATER: Complete
 VOLATILITY: Not Available
 EVAPORATION RATE: >1
 COEFFICIENT OF WATER /OIL DISTRIBUTION: Not Available

SECTION X STABILITY AND REACTIVITY

REACTIVITY: Stable at normal temperatures and pressure.
 CONDITIONS TO AVOID: Avoid heat, flames, sparks and other sources of ignition. Dangerous gases may accumulate in confined spaces. May ignite or explode on contact with combustible materials.
 INCOMPATIBLES: Acids, metals, amines, combustible materials, reducing agents. Specific reactions with sodium hypochlorite include the following:
 ACIDS: Violent reaction.
 ALUMINUM: Corrosive action.
 AMINES: Form explosive chloramines.
 AMMONIA: Form explosive chloramines.
 AMMONIUM SALTS: May form explosive product.
 BENZYL CYANIDE (ACIDIFIED): Explosive reaction.
 CELLOULOSE: Violent reaction
 ETHYLENEIMINE: Forms explosive 1-chloroethyleneimine.
 FORMIC ACID: Explosive mixture.
 METHANOL: May form explosive compound.
 NITROGEN COMPOUNDS: Forms explosive N-chloro compounds.
 ORGANIC AND COMBUSTIBLE MATERIALS: Fire and explosion hazard.
 OXALIC ACID: Intense reaction
 REDUCING AGENTS: Fire and explosion hazard
 ZINC: Corrosive
 HAZARDOUS DECOMPOSITION:
 Thermal decomposition products - Chlorine and Hydrochloric Acid Vapors
 Decomposition Products - Hypochlorous Acid Vapors
 POLYMERIZATION: Will not polymerize.

SECTION XI SODIUM HYPOCHLORITE TOXICOLOGICAL INFORMATION

IRRITATION DATA: 10 mg eyes - rabbit moderate
 TOXICITY DATA:
 1gm/ kg oral-woman; TDLo; 45mg/kg intravenous-man TDLo; 5800 mg/ kg oral-mouse LD50; 140 mg/ kg/9 week(s) continuous oral-rat TDLo
 CARCINOGEN STATUS: According to the IARC, animal inadequate evidence, human no adequate data. Group 3 (Hypochlorite salts)
 LOCAL EFFECTS:
 Corrosive: inhalation, skin contact, eye, ingestion hazards
 ACUTE TOXICITY LEVEL:
 Slightly Toxic if ingested
 MUTAGENIC DATA:
 Mutation in micro organisms - Salmonella typhimurium 1mg / plate (-S9); DNA repair - Escherichiacoli 20ug/ disc; DNA damage - Escherichiacoli 420 umol/L; phage inhibition capacity - Escherichiacoli 103 ug/ well; micronucleus test - non-mammalian species multiple 200 ppb; cytogenetic analysis - non-mammalian species multiple 120 ug/ L; cytogenetic analysis - human lymphocyte 100 ppm 24hour(s); sister chromatid exchange - human embryo 149 mg/ L; cytogenetic analysis - hamster lung 100 mg/ L
 HEALTH EFFECTS:

INHALATION

ACUTE EXPOSURE: May cause severe bronchial irritation, sore throat with possible blistering, coughing,

stomatitis, nausea, labored breathing, shortness of breath and pulmonary edema. 10-20 mg/m³ causes burning of the nose and throat; 40-60 mg/m³ may be fatal. If sufficient amounts are absorbed, may cause effects as detailed in acute ingestion.

CHRONIC EXPOSURE: No data available.

SKIN CONTACT

ACUTE EXPOSURE: Extent of damage depends on concentration, pH, volume of solution and duration of contact. May cause redness, pain, blistering, itchy eczema and chemical burns. Sensitization reactions are possible in previously exposed persons.

CHRONIC EXPOSURE: Effects depend on concentration and duration of exposure. Repeated or prolonged contact with corrosive substances may result in dermatitis or effects similar to acute exposure. Allergic dermatitis has also been reported.

EYE CONTACT

ACUTE EXPOSURE: May cause redness, pain, and blurred vision. Solutions of 5% splashed in human eyes have caused a burning sensation and later only slight superficial disturbance of the corneal epithelium which cleared completely in the next day or two without special treatment. However, one animal study reports a 5% solution causing only moderate irritation with clearing within 7 days. A higher concentration of 15% tested on rabbit eyes caused immediate severe pain, hemorrhages, rapid onset of ground-glass appearance of the corneal epithelium, moderate bluish edema of the whole cornea, chemosis and discharge for several days. Such eyes have sometimes healed in 2-3 weeks with slight or no residual corneal damage but they had neovascularization of the conjunctiva and distortion of the nictitating membrane by scarring.

CHRONIC EXPOSURE: Depending on concentration and duration of exposure, symptoms may be as those of acute exposure.

INGESTION

ACUTE EXPOSURE: May cause irritation and erosion of the mucous membranes, vomiting (possibly bloody) and abdominal pain and spasms. A drop in blood pressure, shallow respiration, edema (possibly severe) of pharynx, larynx, and glottis, confusion, convulsions, delirium and coma may occur. Cyanosis and circulatory collapse are possible. Esophageal or gastric perforation and strictures are rare. Death may occur, usually due to complications of severe local injury such as toxemia, shock, perforations, hemorrhage, infection and obstruction. Massive ingestions may produce fatal hyperchloremic metabolic acidosis or aspiration pneumonitis.

CHRONIC EXPOSURE: Sensitization reactions are reported in individuals who are exposed in small amounts through their water supply. High doses have caused sperm abnormality in mice.

SECTION XII ECOLOGICAL INFORMATION

ECOTOXICITY DATA:

FISH TOXICITY: 94.0 ug/L 96h hour(s) LC50 (Mortality) Cutthroat trout
(*Oncorhynchus clarki*)

INVERTEBRATE TOXICITY: 31.6 ug/L 7 hour(s) LC50 (Species Diversity) Protozoan phylum (Protozoa)

ALGAL TOXICITY: 90 ug/L 96 hour(s) LC50 (Mortality) Algae, phytoplankton, algal mat (Algae)

PHYTOTOXICITY: 230 ug/L 35 hour(s) (Biomass) Curled pondweed (*Potamogeton crispus*)

OTHER TOXICITY: 2.1 ug/L 28 day(s) (Chlorophyll) Aquatic community (Aquatic community)

ENVIRONMENTAL SUMMARY: Highly toxic to aquatic life.

SECTION XIII DISPOSAL CONSIDERATIONS

Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001. Dispose in accordance with all applicable regulations.

SECTION XIV TRANSPORT INFORMATION

U.S. DOT 49 CFR 172.101 SHIPPING NAME-UN NUMBER: Sodium Hypochlorite) - UN1791

U.S. DOT 49 CFR 172.101 HAZARD CLASS OR DIVISION: 8

U.S. DOT 49 CFR 172.101 PACKING GROUP: III (less than 16% available chlorine) / II (16% or more available chlorine)

U.S. DOT 49 CFR 172.101 AND SUBPART E LABELING REQUIREMENTS: Corrosive

U.S. DOT 49 CFR 172.101 PACKAGING AUTHORIZATIONS:

EXCEPTIONS: 49 CFR 173.154

NON-BULK PACKAGING: 49 CFR 173.203 (less than 16% available chlorine) / 49 CFR 173.202 (16% or more available chlorine)

BULK PACKAGING: 49 CFR 173.241 (less than 16% available chlorine) / 49 CFR 173.242 (16% or more available chlorine)

U.S. DOT 49 CFR 172.101 QUANTITY LIMITATIONS:

PASSENGER AIRCRAFT OR RAILCAR: 5 LITERS / (less than 16% available chlorine) / 1 LITERS (16% or more available chlorine)

CARGO AIRCRAFT ONLY: 60 LITERS / (less than 16% available chlorine) / 30 LITERS (16% or more available chlorine)

SECTION XV REGULATORY INFORMATION

U.S. REGULATIONS

TSCA INVENTORY STATUS: Y

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

CERCLA SECTION 103 (40CFR302.4): Y

SODIUM HYPOCHLORITE: 100 LBS RQ

SARA SECTION 302 (40CFR355.30) : N

SARA SECTION 304 (40CFR355.40) : N

SARA SECTION 313 (40CFR372.65) : N

SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40CFR370.21):

ACUTE: Y

CHRONIC: N

FIRE: N

REACTIVE: N

SUDDEN RELEASE: N

OSHA PROCESS SAFETY (29CFR1910.119): N

STATE REGULATIONS:

California Proposition 65: N EUROPEAN REGULATIONS:

EC NUMBER (BINECS) : 231-668-3

EC RISK AND SAFETY PHRASES:

R 31 Contact with acids liberates toxic gas.

R 34 Causes burns.

S ½ Keep locked-up and out of reach of children.

S 28b After contact with skin, wash immediately with plenty of soap and water.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

S 50 Do not mix with incompatible materials.

CONCENTRATION LIMITS:

C>10% C R 31-34

5%<=C<=10% Xi R 31-36/38

GERMAN REGULATIONS:

WATER HAZARD CLASS (WGK) : 2 (Official German Classification)

SECTION XVI OTHER INFORMATION

For additional information, contact our technical service department.

Information contained in this MSDS refers only to the specific material designated and does not relate to any process or use involving other materials. This information is based on data believed to be reliable, and the Product is intended to be used in a manner that is customary and reasonably foreseeable. Since actual use and handling are beyond our control, no warranty, express or implied, is made and no liability is assumed by Odyssey Manufacturing in connection with the use of this information.

NSF International

RECOGNIZES

ODYSSEY MANUFACTURING COMPANY
TAMPA, FL

AS COMPLYING WITH ANSI/NSF 60.
PRODUCTS APPEARING IN THE NSF OFFICIAL LISTING ARE
AUTHORIZED TO BEAR THE NSF MARK.



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The Danish Council
for Accreditation



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Accredited by the
Standards Council
of Canada

This certificate is the property of NSF International and must be returned upon request. To verify certification, call 800 NSF-MARK or (1) 734 763-8010.

Stan S. Grizan, General Manager
Drinking Water Additives

May 4, 2000
Certificate #25070/25070B

NovaChem

Laboratories, Inc

Date: 7 July 2003

Call for results over the phone
513-523-3605

Analysis Results

Company: Odyssey Manufacturing Co
Pat Allman
Fax: 813-630-2589

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Date Received: 7/1
Date Analyzed: 7/1,7

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Cu, mg/L	<0.02
Ni, mg/L	<0.02
Filter Test (1,000 mL)	1 min 28 sec

5172 College Corner Pike, P.O. Box 638, Oxford, Ohio 45056
Tel: 513-523-3605, FAX: 513-523-4025
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EMERGENCY RESPONSE NUMBER:
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SUBSTANCE: SODIUM HYPOCHLORITE

TRADE NAME: Ultra-CHLOR

CHEMICAL NAME/SYNONYMS: Sodium Hypochlorite Solution, Bleach Solution, Bleach Liquor, Hypo-
solution, Bleach, and Liquid Bleach.

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EMERGENCY OVERVIEW

COLOR: Yellow

PHYSICAL FORM: Liquid

ODOR: Chlorine Odor

MAJOR HEALTH HAZARDS: Respiratory Tract Burns, Skin Burns, Mucous Membrane Burns, and Eye Irritation
HAZARDOUS MIXTURES WITH OTHER LIQUIDS, SOLIDS, OR GASES: Reacts violently with acids
liberating chlorine gas. Also reacts with organic substance. When heated, gives off oxygen that may increase fire
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- **SHORT TERM EXPOSURE:** Irritation (possibly severe), possible eye damage
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EYE PROTECTION: Splash goggles are preferred to a faceshield. Another option is to wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: It is recommended to wear appropriate chemical resistant clothing to avoid body contact such as a rubber apron or rain suit. Boots are preferred for footwear.

GLOVES: Wear appropriate chemical resistant gloves.

RESPIRATOR: Under conditions of frequent use or heavy exposure, respiratory protection may be needed.

Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.

- Any chemical cartridge respirator with organic vapor cartridge(s).
- Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s)
- Any air-purifying respirator with a full facepiece and an organic vapor canister
- Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply (Use for Unknown Concentrations or those that may be Immediately Dangerous to Life or Health)
- Any self-contained breathing apparatus with a full facepiece (Use for High Concentrations or those which are immediately Dangerous to Life or Health)

SECTION IX PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL APPEARANCE: Liquid

APPEARANCE AND ODOR: Clear - Chlorine odor like household bleach.

COLOR: Greenish - Yellowish cast

MOLECULAR WEIGHT: 74.44

MOLECULAR FORMULA: Na-O-Cl

BOILING POINT: Degrades at 230 Degrees Fahrenheit
FREEZING POINT: 7 Degrees Fahrenheit
SPECIFIC GRAVITY: 1.15 - 1.17 at 60 Degrees Fahrenheit
PH: Approximately 11 - 13
VAPOR PRESSURE (mm HG): Vapor Pressure of water + decomposition product Vapor Pressure
VAPOR DENSITY: Not Available
SOLUBILITY IN WATER: Complete
VOLATILITY: Not Available
EVAPORATION RATE: >1
COEFFICIENT OF WATER /OIL DISTRIBUTION: Not Available

SECTION X STABILITY AND REACTIVITY

REACTIVITY: Stable at normal temperatures and pressure.
CONDITIONS TO AVOID: Avoid heat, flames, sparks and other sources of ignition. Dangerous gases may accumulate in confined spaces. May ignite or explode on contact with combustible materials.
INCOMPATIBLES: Acids, metals, amines, combustible materials, reducing agents. Specific reactions with sodium hypochlorite include the following:
ACIDS: Violent reaction.
ALUMINUM: Corrosive action.
AMINES: Form explosive chloramines.
AMMONIA: Form explosive chloramines.
AMMONIUM SALTS: May form explosive product.
BENZYL CYANIDE (ACIDIFIED): Explosive reaction.
CELULOSE: Violent reaction
ETHYLENEIMINE: Forms explosive 1-chloroethylencimine.
FORMIC ACID: Explosive mixture.
METHANOL: May form explosive compound.
NITROGEN COMPOUNDS: Forms explosive N-chloro compounds.
ORGANIC AND COMBUSTIBLE MATERIALS: Fire and explosion hazard.
OXALIC ACID: Intense reaction
REDUCING AGENTS: Fire and explosion hazard
ZINC: Corrosive
HAZARDOUS DECOMPOSITION:
 Thermal decomposition products - Chlorine and Hydrochloric Acid Vapors
 Decomposition Products - Hypochlorous Acid Vapors
POLYMERIZATION: Will not polymerize.

SECTION XI SODIUM HYPOCHLORITE TOXICOLOGICAL INFORMATION

IRRITATION DATA: 10 mg eyes - rabbit moderate
TOXICITY DATA:
 1gm/ kg oral-woman; TDLo; 45mg/kg intravenous-man TDLo; 5800 mg/ kg oral-mouse LD50; 140 mg/ kg/9 week(s) continuous oral-rat TDLo
CARCINOGEN STATUS: According to the IARC, animal inadequate evidence, human no adequate data, Group 3 (Hypochlorite salts)
LOCAL EFFECTS:
 Corrosive: inhalation, skin contact, eye, ingestion hazards
ACUTE TOXICITY LEVEL:
 Slightly Toxic if ingested
MUTAGENIC DATA:
 Mutation in micro organisms - Salmonella typhimurium 1mg / plate (-S9); DNA repair - Escherichiacoli 20ug/ disc; DNA damage - Escherichiacoli 420 umol/L; phage inhibition capacity - Escherichiacoli 103 ug/ well; micronucleus test - non-mammalian species multiple 200 ppb; cytogenetic analysis - non-mammalian species multiple 120 ug/ L; cytogenetic analysis - human lymphocyte 100 ppm 24hour(s); sister chromatid exchange - human embryo 149 mg/ L; cytogenetic analysis - hamster lung 100 mg/ L
HEALTH EFFECTS:
INHALATION
ACUTE EXPOSURE: May cause severe bronchial irritation, sore throat with possible blistering, coughing.

stomatitis, nausea, labored breathing, shortness of breath and pulmonary edema. 10-20 mg/m³ causes burning of the nose and throat; 40-60 mg/m³ may be fatal. If sufficient amounts are absorbed, may cause effects as detailed in acute ingestion.

CHRONIC EXPOSURE: No data available.

SKIN CONTACT

ACUTE EXPOSURE: Extent of damage depends on concentration, pH, volume of solution and duration of contact. May cause redness, pain, blistering, itchy eczema and chemical burns. Sensitization reactions are possible in previously exposed persons.

CHRONIC EXPOSURE: Effects depend on concentration and duration of exposure. Repeated or prolonged contact with corrosive substances may result in dermatitis or effects similar to acute exposure. Allergic dermatitis has also been reported.

EYE CONTACT

ACUTE EXPOSURE: May cause redness, pain, and blurred vision. Solutions of 5% splashed in human eyes have caused a burning sensation and later only slight superficial disturbance of the corneal epithelium which cleared completely in the next day or two without special treatment. However, one animal study reports a 5% solution causing only moderate irritation with clearing within 7 days. A higher concentration of 15% tested on rabbit eyes caused immediate severe pain, hemorrhages, rapid onset of ground-glass appearance of the corneal epithelium, moderate bluish edema of the whole cornea, chemosis and discharge for several days. Such eyes have sometimes healed in 2-3 weeks with slight or no residual corneal damage but they had neovascularization of the conjunctiva and distortion of the nictitating membrane by scarring.

CHRONIC EXPOSURE: Depending on concentration and duration of exposure, symptoms may be as those of acute exposure.

INGESTION

ACUTE EXPOSURE: May cause irritation and erosion of the mucous membranes, vomiting (possibly bloody) and abdominal pain and spasms. A drop in blood pressure, shallow respiration, edema (possibly severe) of pharynx, larynx, and glottis, confusion, convulsions, delirium and coma may occur. Cyanosis and circulatory collapse are possible. Esophageal or gastric perforation and strictures are rare. Death may occur, usually due to complications of severe local injury such as toxemia, shock, perforations, hemorrhage, infection and obstruction. Massive ingestions may produce fatal hyperchloremic metabolic acidosis or aspiration pneumonia.

CHRONIC EXPOSURE: Sensitization reactions are reported in individuals who are exposed in small amounts through their water supply. High doses have caused sperm abnormality in mice.

SECTION XII ECOLOGICAL INFORMATION

ECOTOXICITY DATA:

FISH TOXICITY: 94.0 ug/L 96h hour(s) LC50 (Mortality) Cutthroat trout
(*Oncorhynchus clarki*)

INVERTEBRATE TOXICITY: 31.6 ug/L 7 hour(s) IC50 (Species Diversity) Protozoan phylum (Protozoa)

ALGAL TOXICITY: 90 ug/L 96 hour(s) LC50 (Mortality) Algae, phytoplankton, algal mat (Algae)

PHYTOTOXICITY: 230 ug/L 35 hour(s) (Biomass) Curled pondweed (*Potamogeton crispus*)

OTHER TOXICITY: 2.1 ug/L 28 day(s) (Chlorophyll) Aquatic community (Aquatic community)

ENVIRONMENTAL SUMMARY: Highly toxic to aquatic life.

SECTION XIII DISPOSAL CONSIDERATIONS

Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001. Dispose in accordance with all applicable regulations.

SECTION XIV TRANSPORT INFORMATION

U.S. DOT 49 CFR 172.101 SHIPPING NAME-UN NUMBER: Sodium Hypochlorite - UN1791

U.S. DOT 49 CFR 172.101 HAZARD CLASS OR DIVISION: 8

U.S. DOT 49 CFR 172.101 PACKING GROUP: III (less than 16% available chlorine) / II (16% or more available chlorine)

U.S. DOT 49 CFR 172.101 AND SUBPART E LABELING REQUIREMENTS: Corrosive

U.S. DOT 49 CFR 172.101 PACKAGING AUTHORIZATIONS:

EXCEPTIONS: 49 CFR 173.154
 NON- BULK PACKAGING: 49 CFR 173.203 (less than 16% available chlorine) / 49 CFR 173.202 (16% or more available chlorine)
 BULK PACKAGING: 49 CFR 173.241 (less than 16% available chlorine) / : 49 CFR 173.242 (16% or more available chlorine)
 U.S. DOT 49 CFR 172.101 QUANTITY LIMITATIONS:
 PASSENGER AIRCRAFT OR RAILCAR: 5 LITERS / (less than 16% available chlorine) / 1 LITERS (16% or more available chlorine)
 CARGO AIRCRAFT ONLY: 60 LITERS / (less than 16% available chlorine) / 30 LITERS (16% or more available chlorine)

SECTION XV REGULATORY INFORMATION

U.S. REGULATIONS

TSCA INVENTORY STATUS: Y

TSCA 12(b) EXPORT NOTIFICATION: Not listed.
 CERCLA SECTION 103 (40CFR302.4): Y
 SODIUM HYPOCHLORITE: 100 LBS RQ
 SARA SECTION 302 (40CFR355.30) : N
 SARA SECTION 304 (40CFR355.40) : N
 SARA SECTION 313 (40CFR372.65) : N
 SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40CFR370.21):
 ACUTE: Y
 CHRONIC: N
 FIRE: N
 REACTIVE: N
 SUDDEN RELEASE: N
 OSHA PROCESS SAFETY (29CFR1910.119): N
 STATE REGULATIONS:
 California Proposition 65: N EUROPEAN REGULATIONS:
 EC NUMBER (DINECS) : 231-668-3

EC RISK AND SAFETY PHRASES:

R 31 Contact with acids liberates toxic gas.
 R 34 Causes burns.
 S ½ Keep locked-up and out of reach of children.
 S 28b After contact with skin, wash immediately with plenty of soap and water.
 S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)
 S 50 Do not mix with incompatible materials.

CONCENTRATION LIMITS:

C>10% C R 31-34
 5%<=C<=10% Xi R 31-36/38

GERMAN REGULATIONS:

WATER HAZARD CLASS (WGK) : 2 (Official German Classification)

SECTION XVI OTHER INFORMATION

For additional information, contact our technical service department.

Information contained in this MSDS refers only to the specific material designated and does not relate to any process or use involving other materials. This information is based on data believed to be reliable, and the Product is intended to be used in a manner that is customary and reasonably foreseeable. Since actual use and handling are beyond our control, no warranty, express or implied, is made and no liability is assumed by Odyssey Manufacturing in connection with the use of this information.

NSF International

RECOGNIZES

ODYSSEY MANUFACTURING COMPANY
TAMPA, FL

AS COMPLYING WITH ANSI/NSF 60.
PRODUCTS APPEARING IN THE NSF OFFICIAL LISTING ARE
AUTHORIZED TO BEAR THE NSF MARK.



Certification Program
Accredited by the
American National
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Certification Program
Accredited by BSI
the British Council
for Accreditation



Certification Program
Accredited by the
Standards Council
of Canada

This certificate is the property of NSF International and must be returned upon request. To verify certification, call 800 NSF-MARK or (1) 734 769-8010.

Stan S. Ghazab, General Manager
Drinking Water Additives

May 4, 2000
Certificate #25070/25070B

ADDENDUM #1/FORMAL QUOTA N NO.: Q-040024
LEE COUNTY, FLORIDA
PROPOSAL QUOTE FORM
FOR THE ANNUAL PURCHASE OF
CHEMICALS FOR UTILITIES

ATTACHMENT 6

DATE SUBMITTED: December 12, 2003

VENDOR NAME: Odyssey Manufacturing Company

TO: The Board of County Commissioners
Lee County
Fort Myers, Florida

Having carefully examined the "General Conditions", and the "Detailed Specifications", all of which are contained herein, the Undersigned proposes to furnish the following which meet these specifications:

The undersigned acknowledges receipt of Addenda numbers:

#1

GRAND TOTAL (ALL SECTIONS): \$ 191,250.00

WILL YOU DELIVER WITH YOUR OWN VEHICLE AS OPPOSED TO COMMON CARRIER?

YES X NO _____

SECTION 1, ANHYDROUS AMMONIA

Specify product name: _____

\$ _____ EA. X 60.6 tons = Total Cost \$ _____

SECTION 1A, ANHYDROUS AMMONIA

Specify product name: _____

\$ _____ EA. X 4 (150# cylinders) = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 2, ANIONIC POLYMERS

Specify product name: _____

\$ _____ EA. X 24,000 lbs = Total Cost \$ _____

Manufacturer _____ **PolyFloc AP 1100P, or equal**

MINIMUM ORDER QUANTITY: _____

SECTION 3, AQUA AMMONIA 18%

Specify product name: _____

\$ _____ EA. X 8,000 gallons = Total Cost \$ _____

Manufacturer _____

MINIMUM ORDER QUANTITY: _____

SECTION 4, BENTONITE CLAY ACCUFLOC SDG

Specify product name: _____

\$ _____ EA. X 500 lbs = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 5, CALCIUM HYPOCHLORITE 3 inch stabilized tablets

Specify product name: _____

\$ _____ EA. X 24 (100# pails) = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 6, CITRIC ACID

Specify product name: _____

\$ _____ EA. X 500 lbs = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 7, HYDRATED LIME

Specify product name: _____

\$ _____ EA. X 6,480 (50# bags) = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 8, HYDROCHLORIC ACID 31% (muriatic acid)

Specify product name: _____

\$ _____ EA. X 4,800 gallons (275 gal. totes) = Total Cost \$ _____

Manufacturer _____

SECTION 8A, HYDROCHLORIC ACID 31% (muriatic acid)

Specify product name: _____

\$ _____ EA. X 420 gallons (15 gal. carboys) = Total Cost \$ _____

Manufacturer _____

SECTION 8B, HYDROCHLORIC ACID 31% (muriatic acid)

Specify product name: _____

\$ _____ EA. X 244 gallons (1 gal. jugs) = Total Cost \$ _____

Manufacturer _____

MINIMUM ORDER QUANTITY: _____

SECTION 9, HYDROFLUOSILIC ACID 23%

Specify product name: _____

\$ _____ EA. X 13,000 gallons = Total Cost \$ _____

Specify product name : _____

MINIMUM ORDER QUANTITY: _____

SECTION 9A, HYDROFLUOSILIC ACID 23%

Specify product name: _____

\$ _____ EA. X 15 (275 gal. Totes) = Total Cost \$ _____

Specify product name : _____

SECTION 10, POLYMER (LIQUID)

Specify product name: _____

\$ _____ EA. X 2,000 lbs = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 11, POTASSIUM PERMANGANATE

Specify product name: _____

\$ _____ EA. X 2,000 lbs = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 12, PYRO-PHOSPHATE

Specify product name:

\$ _____ EA. X 18,000 lbs = Total Cost \$ _____

MINIMUM ORDER QUANTITY:

SECTION 13, SODA ASH

Specify product name: _____

\$ _____ EA. X 98 (50# bags) = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 13A, SODA ASH

Specify product name: _____

\$ _____ EA. X 200 tons = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 14, SODIUM HYPOCHLORITE SOLUTION

Specify product name: UltraChlor

\$.425 EA. X 450,000 gallons = Total Cost \$ 191,250.00

MINIMUM ORDER QUANTITY: none

SECTION 14A, SODIUM HYPOCHLORITE SOLUTION

Specify product name: _____

\$ _____ EA. X 20 (55 gal. drums) = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 15, SODIUM METABISULFITE

Specify product name: _____

\$ _____ EA. X 500 (50# bags) = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 16, ZINC ORTHO- PHOSPHATE

Specify product name: _____

\$ _____ EA. X 49,000 lbs = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

TO BE STARTED WITHIN 2 CALENDAR DAYS AFTER RECEIPT OF AWARD AND PURCHASE ORDER.

Is your firm interested in being considered for the Local Vendor Preference?

Yes _____ No X

If yes, then read the paragraph entitled "Local Vendor Preference" included in these specifications. Also complete the Local Vendor Preference Questionnaire and return with your quotation.

Quoters should carefully read all the terms and conditions of the specifications. Any representation of deviation or modification to the quote may be grounds to reject the quote.

Are there any modifications to the quote or specifications:

Yes _____ No X

Failure to clearly identify any modifications in the space below or on a separate page may be grounds for the quoter being declared nonresponsive or to have the award of the quote rescinded by the County.

MODIFICATIONS:

N/A

Quoter shall submit his/her quote on the County's Proposal Quote Form, including the firm name and authorized signature. Any blank spaces on the Proposal Quote Form, qualifying notes or exceptions, counter offers, lack of required submittals, or signatures, on County's Form may result in the Quoter/Quote being declared non-responsive by the County.

ANTI-COLLUSION STATEMENT

THE BELOW SIGNED QUOTER HAS NOT DIVULGED TO, DISCUSSED OR COMPARED HIS QUOTE WITH OTHER QUOTERS AND HAS NOT COLLUDED WITH ANY OTHER QUOTER OR PARTIES TO A QUOTE WHATSOEVER. NOTE: NO PREMIUMS, REBATES OR GRATUITIES TO ANY EMPLOYEE OR AGENT ARE PERMITTED EITHER WITH, PRIOR TO, OR AFTER ANY DELIVERY OF MATERIALS. ANY SUCH VIOLATION WILL RESULT IN THE CANCELLATION AND/OR RETURN OF MATERIAL (AS APPLICABLE) AND THE REMOVAL FROM THE MASTER BIDDERS LIST.

FIRM NAME Odyssey Manufacturing Co.

BY (Printed): Patrick Allman

BY (Signature): 

TITLE: General Manager

FEDERAL ID # OR S.S.# 65-0846345

ADDRESS: 1484 Massaro Blvd.

Tampa, FL 33619

PHONE NO.: (813) 635-0339

(813) 630-2589

FAX NO.: _____

CELLULAR PHONE/PAGER NO.: (813) 335-3444

LEE COUNTY OCCUPATIONAL LICENSE NUMBER: N/A

E-MAIL ADDRESS: pallman@odysseymanufacturing.com

REVISED: 7/28/00

ADDENDUM #1/FORMAL QUOTA/FCN NO.: Q-040024
ATTACHMENT A
LOCAL VENDOR PREFERENCE QUESTIONNAIRE
(LEE COUNTY ORDINANCE NO. 00-10)

Instructions: Please complete either Part A or B whichever is applicable to your firm

PART A: VENDOR'S PRINCIPAL PLACE OF BUSINESS IS LOCATED WITHIN LEE COUNTY (Only complete Part A if your principal place of business is located within the boundaries of Lee County)

What is the physical location of your principal place of business that is located within the boundaries of Lee County, Florida?

N/A

What is the size of this facility (i.e. sales area size, warehouse, storage yard, etc.)

N/A

PART B: VENDOR'S PRINCIPAL PLACE OF BUSINESS IS NOT LOCATED WITHIN LEE COUNTY OR DOES NOT HAVE A PHYSICAL LOCATION WITHIN LEE COUNTY (Please complete this section.)

How many employees are available to service this contract? 32

Describe the types and amount of equipment you have available to service this contract.

One manufacturing facility, and a fleet of tractors and trailers

Describe the types and amount of material stock that you have available to service this contract.

Tank storage farm containing several 100,000 gallons

4. Have you provided goods or services to Lee County on a regular basis for the preceding, consecutive five years?

Yes _____ No X _____

If yes, please provide your contractual history with Lee County for the past five, consecutive years. Attach additional pages if necessary.

Date: 7 July 2003

Call for results over the phone
513-523-3605

Analysis Results

Company: Odyssey Manufacturing Co
Pat Allman
Fax: 813-630-2589

Sample: Bleach, 6/27
Date Received: 7/1
Date Analyzed: 7/1,7

Parameter	Sample
Wt% NaOCl	11.14
Wt% Available Chlorine	
Wt% NaOH	0.213
Calculated pH	12.8
Wt% Na ₂ CO ₃	0.118
Specific Gravity	1.163
ClO ₃ ⁻ , mg/L	1,022
BrO ₃ ⁻ , mg/L	10
Fe, mg/L	<0.05
Cu, mg/L	<0.02
Ni, mg/L	<0.02
Filter Test (1,000 mL)	1 min 28 sec

NOTE:

Trade Percent Calculation

$$= \frac{(\text{Weight \%})(\text{Specific Gravity})}{1.05}$$
$$= \frac{(11.14)(1.163)}{1.05} = \underline{\underline{12.34}}$$



December 1, 2003

Ms. Chevone Peterson
Purchasing Department
Lee County
3434 Hancock Bridge Parkway
#307
North Fort Myers, Florida 33903

Re: **REQUEST FOR QUOTATIONS – CHEMICALS FOR UTILITIES**

Dear Ms. Peterson,

Odyssey Manufacturing Company is pleased to submit our proposal for the above referenced bid for the sodium hypochlorite. In accordance with your instructions, we have enclosed one original and two copies of the "Bid Forms", documentation of our NSF certification as a manufacturer of the product, a Material Safety Data Sheet (MSDS), information on our company (brochure and process flowchart), third-party laboratory analysis of our product and a list of references. We are the only 24 hour per day facility open 7 days per week and can be reached @800-ODYSSEY or facsimile (813) 630-2589. The point of contact would be Patrick H. Allman, General Manager.

Odyssey Manufacturing is also pleased to offer Lee County a bid price of \$.425 per gallon for its Ultrachlor 12.5 Trade Percent sodium hypochlorite for one (1) year with up to four (4) additional year renewal periods. The first renewal period would be at Lee County's sole discretion and Odyssey would be obligated to sell its Ultrachlor sodium hypochlorite at this pricing should Lee County exercise this option. This Bid is offered under the terms and conditions outlined in Lee County's Bid Solicitation.

As you know, Odyssey Manufacturing Co. represents the newest trend in the water treatment business – Chloralkali bleach superplants as a disinfection alternative. Odyssey Manufacturing is a new venture that manufactures bulk sodium hypochlorite utilizing a Kvaerner Chemetics chlor-alkali plant integrated with a Powell Continuous Bleach Plant. We are focused primarily on municipal and private water and wastewater treatment along with industrial customers. As you know, this business was created primarily to serve many the Customers who are switching from chlorine gas to bulk sodium hypochlorite and need a competitively priced, reliable, high quality supply of sodium hypochlorite.

As the only chlor-alkali manufacturing facility in Florida, we can offer a unique combination of high quality combined with a very competitive cost structure. We make our raw materials (chlorine and caustic) on-site out of purified salt and demineralized water utilizing a membrane cell electrolysis process. Not only does this process result in a high quality bleach, but also makes our product cost very competitive as we do not have to pay out of state third parties to make the raw materials for us and have them shipped down by railcar. Thus, we are able to offer long-term fixed pricing which is a major benefit to our customers as they consider alternative disinfectant systems. Additionally, this provides us a significantly higher level of reliability than any other Florida sodium hypochlorite manufacturer as we are not dependent on railcar shipments of chlorine gas into Florida.

MANUFACTURERS OF **ULTRA CHLOR**

www.odysseymanufacturing.com

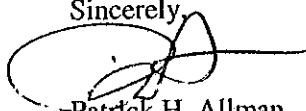
1405 HASTARD BLVD • TAMPA, FL 33619 • (800) ODYSSEY • FAX (813) 740-1629

Odyssey combines great service with the best quality bleach in Florida. Our sodium hypochlorite is a high strength product (12.5 Trade Percent Available Chlorine) with superior ratio control and without all the impurities that most bleach contains. What this means to you the Customer is:

- Low or zero metal contaminants resulting in significantly slower Product degradation leading to **overall cost savings due to reduced sodium hypochlorite consumption**
- Lower Maintenance Costs caused by pluggages and wear because of impurities in the bleach
- Improved Drinking and Effluent Water Quality
- Superior control of excess alkalinity of Product resulting in less overall chemical additional requirements and more stable chemical feed rates
- Less oxygen formation during storage and handling (e.g., which form bubbles in tank and lines) resulting in reduced downtime and more accurate Cl feed rates
- Lower levels of sodium chlorate formation resulting in improved water quality and reduced health concerns
- Significantly lower levels of sodium bromate formation resulting in reduced public health concerns (as you may know, drinking water is limited to 10 ppb beginning in Dec 2001)
- Lower suspended solids resulting in improved water quality and less feeder maintenance
- Minimal insoluble buildup on the inside of pipes and feeders resulting in better operations of the Customer's system

Please call our customers to compare Odyssey Ultrachlor with other suppliers! Because of its short shelf life, buying a superior quality sodium hypochlorite will result in significant savings. We have examined your specifications and can comply with all the requirements. Additionally, we hereby provide written assurance of compliance with OSHA, EPA, NSF, and AWWA regulations and consent to provide samples to Lee County for testing if requested. We also agree to provide a safe handling training course and "refresher courses" for all of your chemicals for the duration of the contract. A list of references is enclosed. Odyssey Manufacturing has no "early terminations" or "safety incidents" in the past five years for any chemical that it sells. This is in stark contrast to other chemical manufacturers. Lastly, we agree to continue to provide engineering, design, drawing and permitting services for all of your proposed sodium hypochlorite conversions. This service is worth well over \$100,000 in the coming year! Please call me if you have any questions at 1-800-ODYSSEY or cellular (813) 335-3444 or visit our website @www.odysseymanufacturing.com. Thank you for your consideration.

Sincerely,



Patrick H. Allman
General Manager

NSF International

RECOGNIZES

ODYSSEY MANUFACTURING COMPANY
TAMPA, FL

AS COMPLYING WITH ANSI/NSF 60.
PRODUCTS APPEARING IN THE NSF OFFICIAL LISTING ARE
AUTHORIZED TO BEAR THE NSF MARK.



Certification Program
Accredited by the
American National
Standards Institute



Certification Program
Accredited by RvA,
the Dutch Council
for Accreditation



Certification Program
Accredited by the
Standards Council
of Canada

This certificate is the property of NSF International and must be returned upon request. To verify certification, call 800 NSF-MARK or (1) 734 769-8010.

May 4, 2000

Certificate #25070/25070B

A handwritten signature in black ink, appearing to read "Stan Hazari".

Stan S. Hazari, General Manager
Drinking Water Additives

Odyssey Manufacturing Company

References

- Hillsborough County (Since July 2000)
Kay McCormick, Water Superintendent
Fawnridge WT Plant
12950 Fawnridge Avenue
Tampa, Fl 33626
Phone: (813) 264-3815
Fax: (813) 264-3920
- City of Palmetto (Since November of 2000)
Don Patterson, WWT Plant Project Manager
1310 28th Ave. West
Palmetto, Fl 34221
Phone: (941) 723-6106
Fax: (941) 723-2579
- City of Orlando Conserv II (Since April 2001)
Charlie Jackson, Lift Station Superintendent
5420 L.B. McLeod Rd.
Orlando, Fl 32811
Phone: (407) 246-2213
Fax: (407) 246-2886
Cell: (321) 231-1369
- City of Orlando Conserv (Since April 2001)
Ernie Cox, Plant Manager Conserv I WWT Plant
400 S. Orange Ave./Floor 4
Orlando, Fl 32801
Phone: (407) 855-4449
Fax: (407) 240-4470
- Tampa Bay Water (Since November 2001)
Richard Anderson, WT Superintendent
2535 Landmark Drive
Clearwater, Fl 33761
Phone: (813) 929-4551
Fax: (813) 929-4558
- City of Venice WT Plant (Since April 2002)
Bill Green, Chief Operator WT Plant
200 North Warfield Avenue
Venice, Fl 34292
Phone: (941) 486-2624
Fax: (941) 486-2084
- City of Bradenton WT Plant (Since April 2000)
Clyde Crews, Chief Operator
5600 Natalie Way
Bradenton, Fl 34203
Phone: (941) 727-6362
Fax: (941) 727-6368
- City of Auburndale WT Plants (Since May 2000)
Don Wilson, Chief Operator
P.O. Box 186
Auburndale, Fl 33823
Phone: (863) 965-5533
Fax: (863) 965-5551
- Charlotte County (Sept 2000)
Verne Hall, Utilities Ops. Manager
20101 Peachland Blvd. Suite 301
Port Charlotte, Fl 33954
Phone: (941) 764-4595
Fax: (941) 627-4603
- City of Cape Coral (Feb 2000)
Andrew Fenske, RO Chief Operator
P.O. Box 150027
Cape Coral, Fl 33915
Phone: (239) 574-0877
Fax: (239) 574-0882
- Sarasota County (Since Oct 2001)
Jerry Schoonmaker, South WRF Supt.
P.O. Box 8
Sarasota, FL 34230
Phone: (941) 316-1071
Fax: (941) 486-2334
- City of Bradenton WWT Plant
Ken Stephen, WWT Superintendent
1810 First Street West
Bradenton, Fl. 34208
Phone: (941) 708-6350
Fax: (941) 708-6351



ODYSSEY
MANUFACTURING CO.

MATERIAL SAFETY DATA SHEET

REVISED 7/2/00

SECTION I CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

ODYSSEY MANUFACTURING CO.
1484 Massaro Boulevard
Tampa, Florida 33619
1-813-635-0339

EMERGENCY RESPONSE NUMBER:
1-800-ODYSSEY (FLORIDA)
1-813-635-0339 (24 hours)

SUBSTANCE: SODIUM HYPOCHLORITE
TRADE NAME: Ultra-CHLOR
CHEMICAL NAME/SYNONYMS: Sodium Hypochlorite Solution, Bleach Solution, Bleach Liquor, Hypo-
solution, Bleach, and Liquid Bleach.
CAS NUMBER: 7681-52-9
CHEMICAL FAMILY: Alkali
FORMULA: NaOCl
DOT PROPER SHIPPING NAME: Hypochlorite Solution
DOT HAZARD CLASS: 8 (Corrosive) PG III; PG II (For solutions greater than 16% available chlorine)
DOT IDENTIFICATION NO: UN1791
RQ: 100 pounds
DOT EMERGENCY GUIDE NO: 154

SECTION II COMPOSITION, INFORMATION ON INGREDIENTS

INGREDIENT(S):	
Sodium Hypochlorite (NaOCl)	10.0 - 20.0% wt
Sodium Hydroxide (NaOH)	0.1 - 0.4% wt
Water (H ₂ O)	79.7 - 89.9% wt

SECTION III HAZARDS IDENTIFICATION

NFPA CLASSIFICATION (SCALE 0-4): Health=2 Fire=0 Reactivity=1
EC CLASSIFICATION (ASSIGNED): C (Corrosive)

EMERGENCY OVERVIEW

COLOR: Yellow

PHYSICAL FORM: Liquid

ODOR: Chlorine Odor

MAJOR HEALTH HAZARDS: Respiratory Tract Burns, Skin Burns, Mucous Membrane Burns, and Eye Irritation

HAZARDOUS MIXTURES WITH OTHER LIQUIDS, SOLIDS, OR GASES: Reacts violently with acids liberating chlorine gas. Also reacts with organic substance. When heated, gives off oxygen that may increase fire hazard.

POTENTIAL HEALTH EFFECTS

INHALATION:

- SHORT TERM EXPOSURE: Irritation to respiratory tract. May have same as effects reported in other routes of exposure, burns, blisters, nausea, difficulty breathing, and lung congestion.
- LONG TERM EXPOSURE: Same as effects reported in short term exposure.

SKIN CONTACT:

- SHORT TERM EXPOSURE: Irritant, reddening of the skin. May have burns, blisters, and itching
- LONG TERM EXPOSURE: Same as effects reported in short term exposure.

EYE CONTACT:

- SHORT TERM EXPOSURE: Irritation (possibly severe), possible eye damage
- LONG TERM EXPOSURE: Same as effects reported in short term exposure.

INGESTION:

- SHORT TERM EXPOSURE: Burns, vomiting stomach pain, disorientation, bluish skin color, convulsions, coma
- LONG TERM EXPOSURE: Same as effects reported in short term exposure.

CARCINOGEN STATUS

OSHA: N

NTP: N

IARC: N

SECTION IV FIRST AID MEASURES

INHALATION: Remove from exposure and get fresh air. Use a bag valve mask or similar device to perform artificial respiration (rescue breathing) if needed. Keep warm and at rest. Get medical attention immediately if artificial respiration is required.

SKIN CONTACT: Remove contaminated clothing, jewelry, and shoes immediately. Flush affected area with large amounts of water, preferably a safety shower. Use soap or mild detergent and large amounts of water until no evidence of chemical remains (at least 15-20 minutes). For burns, cover affected area securely with sterile, dry, loose fitting dressing. If skin is burned, get medical attention immediately.

EYE CONTACT: Wash eyes immediately with large amounts of water, occasionally lifting upper and lower lids, until no evidence of chemical remains (at least 15 minutes). Continue irrigating with a normal saline solution until ready to transport to physician. Cover with sterile bandages. Get medical attention immediately.

INGESTION: Rinse mouth with water. Drink large quantities of milk (water if no milk is available). Milk of magnesia may be helpful. **DO NOT USE ACIDIC ANTIDOTES SUCH AS SODIUM BICARBONATE.** When vomiting occurs, keep head lower than hips to help prevent aspiration. If person is unconscious, do not induce vomiting and turn their head to the side. Never make an unconscious person vomit or drink fluids. Get medical attention.

NOTE TO PHYSICIAN: For inhalation, consider oxygen. For ingestion, avoid gastric lavage, emesis, sodium bicarbonate and acid solutions. Consider the use of antacids.

SECTION V FIRE FIGHTING MEASURES

FLASH POINT: Non-flammable

FLAMMABLE LIMITS: Non-flammable

FIRE AND EXPLOSION HAZARDS: Negligible fire hazard. Oxidizer. This material will react with some metals and cause liberation of oxygen. May ignite or explode on contact with combustible materials. Toxic fumes can be liberated by contact with acid or heat.

EXTINGUISHING MEDIA: Regular dry chemical, carbon dioxide, water, or foam suitable for surrounding fire. For large fires, use regular foam or flood with fine water spray.

FIRE FIGHTING: Wear self-contained breathing apparatus and full protective clothing. Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. Use extinguishing agents appropriate for surrounding fire. Do not get water directly on material. For large fires, flood with fine water spray. Reduce vapors with water spray. Apply water from a protected location or from a safe distance. Avoid body contact or inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

SECTION VI ACCIDENTAL RELEASE MEASURES

OCCUPATIONAL RELEASE: Do not touch spilled material. Stop leak if possible without personal risk. For small spills, collect spilled material in appropriate container for disposal and consider absorbing with sand or other non-combustible material (e.g., do not use sawdust or other combustible material). Be advised, however, that the use of absorbing material is creating hazardous waste and this absorbing material must now be disposed of properly. Collect spilled material in appropriate container for disposal. For small dry spills, move containers away from spill to a safe area. For large spills, dike for later disposal. If possible, do not allow material to enter sewers, streams, ponds or storm conduits as concentrated solutions will seriously injure aquatic life. Keep unnecessary people away, isolate hazard area and deny entry. Contain in as small an area as possible, such as a holding area for dilution and neutralization. Contain spill in plastic drums when available. Dispose of in accordance with Federal, State, and local regulations. Personnel engaged in cleanup operations must be equipped with NIOSH approved respirator protection, rubber boots, gloves, and clothing to avoid body contact. Reportable Quantity (RQ): 100 pounds. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800) 424-8802 (USA) or (202) 426-2675 (USA).

ADVANCE PLANNING: Plan in advance for an occupational release and have necessary equipment and neutralization agents on-site. Contact Odyssey Manufacturing for assistance.

SECTION VII HANDLING AND STORAGE

Store in vented, closed containers that provide protection from direct sunlight. Keep separated from incompatible substances and do not store near acids, heat, or oxidizable materials or organics. When handling, do not mix with other cleaning agents that may liberate chlorine gas vapors (e.g., acidic agents).

Store and handle in accordance with all current regulations and standards including NFPA 430 Code for the Storage of Liquid and Oxidizing Materials.

SECTION VIII EXPOSURE CONTROLS AND PERSONNEL PROTECTION

EXPOSURE LIMITS: 2 mg/m³ AIHA recommended STEL 15 minute(s) for Sodium Hypochlorite

VENTILATION: Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

EYE PROTECTION: Splash goggles are preferred to a faceshield. Another option is to wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: It is recommended to wear appropriate chemical resistant clothing to avoid body contact such as a rubber apron or rain suit. Boots are preferred for footwear.

GLOVES: Wear appropriate chemical resistant gloves.

RESPIRATOR: Under conditions of frequent use or heavy exposure, respiratory protection may be needed.

Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.

- Any chemical cartridge respirator with organic vapor cartridge(s).
- Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s)
- Any air-purifying respirator with a full facepiece and an organic vapor canister
- Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply (Use for Unknown Concentrations or those that may be Immediately Dangerous to Life or Health)
- Any self-contained breathing apparatus with a full facepiece (Use for High Concentrations or those which are immediately Dangerous to Life or Health)

SECTION IX PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL APPEARANCE: Liquid

APPEARANCE AND ODOR: Clear - Chlorine odor like household bleach.

COLOR: Greenish - Yellowish cast

MOLECULAR WEIGHT: 74.44

MOLECULAR FORMULA: Na-O-Cl

BOILING POINT: Degrades at 230 Degrees Fahrenheit
FREEZING POINT: 7 Degrees Fahrenheit
SPECIFIC GRAVITY: 1.15 - 1.17 at 60 Degrees Fahrenheit
PH: Approximately 11 - 13
VAPOR PRESSURE (mm HG): Vapor Pressure of water + decomposition product Vapor Pressure
VAPOR DENSITY: Not Available
SOLUBILITY IN WATER: Complete
VOLATILITY: Not Available
EVAPORATION RATE: >1
COEFFICIENT OF WATER /OIL DISTRIBUTION: Not Available

SECTION X STABILITY AND REACTIVITY

REACTIVITY: Stable at normal temperatures and pressure.

CONDITIONS TO AVOID: Avoid heat, flames, sparks and other sources of ignition. Dangerous gases may accumulate in confined spaces. May ignite or explode on contact with combustible materials.

INCOMPATIBLES: Acids, metals, amines, combustible materials, reducing agents. Specific reactions with sodium hypochlorite include the following:

ACIDS: Violent reaction.

ALUMINUM: Corrosive action.

AMINES: Form explosive chloramines.

AMMONIA: Form explosive chloramines.

AMMONIUM SALTS: May form explosive product.

BENZYL CYANIDE (ACIDIFIED): Explosive reaction.

CELULOSE: Violent reaction

ETHYLENEIMINE: Forms explosive 1-chloroethyleneimine.

FORMIC ACID: Explosive mixture.

METHANOL: May form explosive compound.

NITROGEN COMPOUNDS: Forms explosive N-chloro compounds.

ORGANIC AND COMBUSTIBLE MATERIALS: Fire and explosion hazard.

OXALIC ACID: Intense reaction

REDUCING AGENTS: Fire and explosion hazard

ZINC: Corrosive

HAZARDOUS DECOMPOSITION:

Thermal decomposition products – Chlorine and Hydrochloric Acid Vapors

Decomposition Products – Hypochlorous Acid Vapors

POLYMERIZATION: Will not polymerize.

SECTION XI SODIUM HYPOCHLORITE TOXICOLOGICAL INFORMATION

IRRITATION DATA: 10 mg eyes – rabbit moderate

TOXICITY DATA:

1gm/ kg oral-woman; TDLo; 45mg/kg intravenous-man TDLo; 5800 mg/ kg oral-mouse LD50; 140 mg/ kg/9 week(s) continuous oral-rat TDLo

CARCINOGEN STATUS: According to the IARC, animal inadequate evidence, human no adequate data, Group 3 (Hypochlorite salts)

LOCAL EFFECTS:

Corrosive: inhalation, skin contact, eye, ingestion hazards

ACUTE TOXICITY LEVEL:

Slightly Toxic if ingested

MUTAGENIC DATA:

Mutation in micro organisms – Salmonella typhimurium 1mg / plate (-S9); DNA repair – Escherichiacoli 20ug/ disc; DNA damage – Escherichiacoli 420 umol/L; phage inhibition capacity – Escherichiacoli 103 ug/ well; micronucleus test - non-mammalian species multiple 200 ppb; cytogenetic analysis - non-mammalian species multiple 120 ug/ L; cytogenetic analysis – human lymphocyte 100 ppm 24hour(s); sister chromatid exchange – human embryo 149 mg/ L; cytogenetic analysis – hamster lung 100 mg/ L

HEALTH EFFECTS:

INHALATION

ACUTE EXPOSURE: May cause severe bronchial irritation, sore throat with possible blistering, coughing,

stomatitis, nausea, labored breathing, shortness of breath and pulmonary edema. 10-20 mg/m³ causes burning of the nose and throat; 40-60 mg/m³ may be fatal. If sufficient amounts are absorbed, may cause effects as detailed in acute ingestion.

CHRONIC EXPOSURE: No data available.

SKIN CONTACT

ACUTE EXPOSURE: Extent of damage depends on concentration, pH, volume of solution and duration of contact. May cause redness, pain, blistering, itchy eczema and chemical burns. Sensitization reactions are possible in previously exposed persons.

CHRONIC EXPOSURE: Effects depend on concentration and duration of exposure. Repeated or prolonged contact with corrosive substances may result in dermatitis or effects similar to acute exposure. Allergic dermatitis has also been reported.

EYE CONTACT

ACUTE EXPOSURE: May cause redness, pain, and blurred vision. Solutions of 5% splashed in human eyes have caused a burning sensation and later only slight superficial disturbance of the corneal epithelium which cleared completely in the next day or two without special treatment. However, one animal study reports a 5% solution causing only moderate irritation with clearing within 7 days. A higher concentration of 15% tested on rabbit eyes caused immediate severe pain, hemorrhages, rapid onset of ground-glass appearance of the corneal epithelium, moderate bluish edema of the whole cornea, chemosis and discharge for several days. Such eyes have sometimes healed in 2-3 weeks with slight or no residual corneal damage but they had neovascularization of the conjunctiva and distortion of the nictitating membrane by scarring.

CHRONIC EXPOSURE: Depending on concentration and duration of exposure, symptoms may be as those of acute exposure.

INGESTION

ACUTE EXPOSURE: May cause irritation and erosion of the mucous membranes, vomiting (possibly bloody) and abdominal pain and spasms. A drop in blood pressure, shallow respiration, edema (possibly severe) of pharynx, larynx, and glottis, confusion, convulsions, delirium and coma may occur. Cyanosis and circulatory collapse are possible. Esophageal or gastric perforation and strictures are rare. Death may occur, usually due to complications of severe local injury such as toxemia, shock, perforations, hemorrhage, infection and obstruction. Massive ingestions may produce fatal hyperchloremic metabolic acidosis or aspiration pneumonitis.

CHRONIC EXPOSURE: Sensitization reactions are reported in individuals who are exposed in small amounts through their water supply. High doses have caused sperm abnormality in mice.

SECTION XII ECOLOGICAL INFORMATION

ECOTOXICITY DATA:

FISH TOXICITY: 94.0 ug/L 96h hour(s) LC50 (Mortality) Cutthroat trout
(*Oncorhynchus clarki*)

INVERTEBRATE TOXICITY: 31.6 ug/L 7 hour(s) 1C50 (Species Diversity) Protozoan phylum (Protozoa)

ALGAL TOXICITY: 90 ug/L 96 hour(s) LC50 (Mortality) Algae, phytoplankton, algal mat (Algae)

PHYTOTOXICITY: 230 ug/L 35 hour(s) (Biomass) Curled pondweed (*Potamogeton crispus*)

OTHER TOXICITY: 2.1 ug/L 28 day(s) (Chlorophyll) Aquatic community (Aquatic community)

ENVIRONMENTAL SUMMARY: Highly toxic to aquatic life.

SECTION XIII DISPOSAL CONSIDERATIONS

Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001. Dispose in accordance with all applicable regulations.

SECTION XIV TRANSPORT INFORMATION

U.S. DOT 49 CFR 172.101 SHIPPING NAME-UN NUMBER: Sodium Hypochlorite) - UN1791

U.S. DOT 49 CER 172.101 HAZARD CLASS OR DIVISION: 8

U.S. DOT 49 CFR 172.101 PACKING GROUP: III (less than 16% available chlorine) / II (16% or more available chlorine)

U.S. DOT 49 CFR 172.101 AND SUBPART E LABELING REQUIREMENTS: Corrosive

U.S. DOT 49 CFR 172.101 PACKAGING AUTHORIZATIONS:

EXCEPTIONS: 49 CFR 173.154

NON- BULK PACKAGING: 49 CFR 173.203 (less than 16% available chlorine) / 49 CFR 173.202 (16% or more available chlorine)

BULK PACKAGING: 49 CFR 173.241 (less than 16% available chlorine) / : 49 CFR 173.242 (16% or more available chlorine)

U.S. DOT 49 CFR 172.101 QUANTITY LIMITATIONS:

PASSENGER AIRCRAFT OR RAILCAR: 5 LITERS / (less than 16% available chlorine) / 1 LITERS (16% or more available chlorine)

CARGO AIRCRAFT ONLY: 60 LITERS / (less than 16% available chlorine) / 30 LITERS (16% or more available chlorine)

SECTION XV REGULATORY INFORMATION

U.S. REGULATIONS

TSCA INVENTORY STATUS: Y

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

CERCLA SECTION 103 (40CFR302.4): Y

SODIUM HYPOCHLORITE: 100 LBS RQ

SARA SECTION 302 (40CFR355.30) : N

SARA SECTION 304 (40CFR355.40) : N

SARA SECTION 313 (40CFR372.65) : N

SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40CFR370.21):

ACUTE: Y

CHRONIC: N

FIRE: N

REACTIVE: N

SUDDEN RELEASE: N

OSHA PROCESS SAFETY (29CFR1910.119): N

STATE REGULATIONS:

California Proposition 65: N EUROPEAN REGULATIONS:

EC NUMBER (BINECS) : 231-668-3

EC RISK AND SAFETY PHRASES:

R 31 Contact with acids liberates toxic gas.

R 34 Causes burns.

S ½ Keep locked-up and out of reach of children.

S 28b After contact with skin, wash immediately with plenty of soap and water.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

S 50 Do not mix with incompatible materials.

CONCENTRATION LIMITS:

C>10% C R 31-34

5%<=C<=10% Xi R 31-36/38

GERMAN REGULATIONS:

WATER HAZARD CLASS (WGK) : 2 (Official German Classification)

SECTION XVI OTHER INFORMATION

For additional information, contact our technical service department.

Information contained in this MSDS refers only to the specific material designated and does not relate to any process or use involving other materials. This information is based on data believed to be reliable, and the Product is intended to be used in a manner that is customary and reasonably foreseeable. Since actual use and handling are beyond our control, no warranty, express or implied, is made and no liability is assumed by Odyssey Manufacturing in connection with the use of this information.

ADDENDUM #1/FORMAL QUOTATION NO.: Q-040024
LEE COUNTY, FLORIDA
PROPOSAL QUOTE FORM
FOR THE ANNUAL PURCHASE OF
CHEMICALS FOR UTILITIES

ATTACHMENT 7

DATE SUBMITTED: December 10, 2003

VENDOR NAME: Allied Universal Corp.

TO: The Board of County Commissioners
Lee County
Fort Myers, Florida

Having carefully examined the "General Conditions", and the "Detailed Specifications", all of which are contained herein, the Undersigned proposes to furnish the following which meet these specifications:

The undersigned acknowledges receipt of Addenda numbers:

One

GRAND TOTAL (ALL SECTIONS): \$ _____

WILL YOU DELIVER WITH YOUR OWN VEHICLE AS OPPOSED TO COMMON CARRIER?

YES X NO _____

SECTION 1, ANHYDROUS AMMONIA

Specify product name: _____

\$ No Bid EA. X 60.6 tons = Total Cost \$ _____

SECTION 1A, ANHYDROUS AMMONIA

Specify product name: _____

\$ No Bid EA. X 4 (150# cylinders) = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 2, ANIONIC POLYMERS

Specify product name: _____

\$ No Bid EA. X 24,000 lbs = Total Cost \$ _____

Manufacturer _____ **PolyFloc AP 1100P, or equal**

MINIMUM ORDER QUANTITY: _____

SECTION 3, AQUA AMMONIA 18%

Specify product name: _____

\$ No Bid EA. X 8,000 gallons = Total Cost \$ _____

Manufacturer _____

MINIMUM ORDER QUANTITY: _____

SECTION 4, BENTONITE CLAY ACCUFLOC SDG

Specify product name: _____

\$ No Bid EA. X 500 lbs = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 5, CALCIUM HYPOCHLORITE 3 inch stabilized tablets

Specify product name: _____

\$ No Bid EA. X 24 (100# pails) = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 6, CITRIC ACID

Specify product name: _____

\$ No Bid EA. X 500 lbs = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 7, HYDRATED LIME

Specify product name: _____

\$ No Bid EA. X 6,480 (50# bags) = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 8, HYDROCHLORIC ACID 31% (muriatic acid)

Specify product name: _____

\$ No Bid EA. X 4,800 gallons (275 gal. totes) = Total Cost \$ _____

Manufacturer _____

SECTION 8A, HYDROCHLORIC ACID 31% (muriatic acid)

Specify product name: _____

\$ No Bid EA. X 420 gallons (15 gal. carboys) = Total Cost \$ _____

Manufacturer _____

SECTION 8B, HYDROCHLORIC ACID 31% (muriatic acid)

Specify product name: _____

\$ No Bid EA. X 244 gallons (1 gal. jugs) = Total Cost \$ _____

Manufacturer _____

MINIMUM ORDER QUANTITY: _____

SECTION 9, HYDROFLUOSILIC ACID 23%

Specify product name: HFS

\$ 1.15 EA. X 13,000 gallons = Total Cost \$ 14,950.00

Specify product name : HFS

MINIMUM ORDER QUANTITY: 500 Gallons

SECTION 9A, HYDROFLUOSILIC ACID 23%

Specify product name:

\$ No Bid EA. X 15 (275 gal. Totes) = Total Cost \$

Specify product name :

SECTION 10, POLYMER (LIQUID)

Specify product name:

\$ No Bid EA. X 2,000 lbs = Total Cost \$

MINIMUM ORDER QUANTITY:

SECTION 11, POTASSIUM PERMANGANATE

Specify product name:

\$ No Bid EA. X 2,000 lbs = Total Cost \$

MINIMUM ORDER QUANTITY:

SECTION 12, PYRO-PHOSPHATE

Specify product name:

\$ No Bid EA. X 18,000 lbs = Total Cost \$

MINIMUM ORDER QUANTITY:

SECTION 13, SODA ASH

Specify product name: _____

\$ No Bid EA. X 98 (50# bags) = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 13A, SODA ASH

Specify product name: _____

\$ No Bid EA. X 200 tons = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 14, SODIUM HYPOCHLORITE SOLUTION

Specify product name: Aqua Guard

\$.394 EA. X 450,000 gallons = Total Cost \$ 177,300.00

MINIMUM ORDER QUANTITY: No Minimum

SECTION 14A, SODIUM HYPOCHLORITE SOLUTION

Specify product name: Aqua Guard

\$ 48.40 EA. X 20 (55 gal. drums) = Total Cost \$ 968.00

\$50.00 Drum Deposit

MINIMUM ORDER QUANTITY: 4 Drums per location

SECTION 15, SODIUM METABISULFITE

Specify product name: _____

\$ No Bid EA. X 500 (50# bags) = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 16, ZINC ORTHO- PHOSPHATE

Specify product name: _____

\$ No Bid EA. X 49,000 lbs = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

TO BE STARTED WITHIN immediately CALENDAR DAYS AFTER RECEIPT OF AWARD AND PURCHASE ORDER.

Is your firm interested in being considered for the Local Vendor Preference?

Yes _____ No X _____

If yes, then read the paragraph entitled "Local Vendor Preference" included in these specifications. Also complete the Local Vendor Preference Questionnaire and return with your quotation.

Quoters should carefully read all the terms and conditions of the specifications. Any representation of deviation or modification to the quote may be grounds to reject the quote.

Are there any modifications to the quote or specifications:

Yes _____ No X _____

Failure to clearly identify any modifications in the space below or on a separate page may be grounds for the quoter being declared nonresponsive or to have the award of the quote rescinded by the County.

MODIFICATIONS:

Quoter shall submit his/her quote on the County's Proposal Quote Form, including the firm name and authorized signature. Any blank spaces on the Proposal Quote Form, qualifying notes or exceptions, counter offers, lack of required submittals, or signatures, on County's Form may result in the Quoter/Quote being declared non-responsive by the County.

ANTI-COLLUSION STATEMENT

THE BELOW SIGNED QUOTER HAS NOT DIVULGED TO, DISCUSSED OR COMPARED HIS QUOTE WITH OTHER QUOTERS AND HAS NOT COLLUDED WITH ANY OTHER QUOTER OR PARTIES TO A QUOTE WHATSOEVER. NOTE: NO PREMIUMS, REBATES OR GRATUITIES TO ANY EMPLOYEE OR AGENT ARE PERMITTED EITHER WITH, PRIOR TO, OR AFTER ANY DELIVERY OF MATERIALS. ANY SUCH VIOLATION WILL RESULT IN THE CANCELLATION AND/OR RETURN OF MATERIAL (AS APPLICABLE) AND THE REMOVAL FROM THE MASTER BIDDERS LIST.

FIRM NAME Allied Universal Corp.

BY (Printed): Catherine Guillarmod

BY (Signature): *Catherine Guillarmod*

TITLE: Executive Administrator

FEDERAL ID # OR S.S.# 59 0776285

ADDRESS: 3901 N.W. 115 Ave.

Miami, FL 33178

PHONE NO.: (305) 888-2623

FAX NO.: (305) 463-8369

CELLULAR PHONE/PAGER NO.: _____

LEE COUNTY OCCUPATIONAL LICENSE NUMBER: _____

E-MAIL ADDRESS: cathieg@allieduniversal.com

REVISED: 7/28/00

ALLIED UNIVERSAL CORPORATION

Headquarters: 3901 NW 115th Avenue, Miami, Florida 33178 Phone: (305) 888 - 2623

MATERIAL SAFETY DATA SHEET

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR § 1910.1200.

TODAY'S DATE: 01/20/03

MSDS NUMBER: 0001

24 HOUR EMERGENCY CHEMICAL SPILL OR RELEASE PHONE NUMBERS:

Allied Universal Corp. at 1-305-483-7732 (Digital Beeper) and/or CHEMTREC at 1-800-424-9300

SECTION 1 CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Sodium Hypochlorite

Product Names: Aqua Guard Chlorinating Solution, Aqua Guard Bleach, Aqua Guard Sanitizer, Liquid Chlorine Solution, Liquid Bleach, Hypochlorite, Hypo and Chlorine Bleach.

Listed Strengths: 10%, 10.5%, 12.5% and 15%

CAS Number: 7681-52-9

Date MSDS Revised: January 2003 (previous revision 7/01)

Product Use: Pesticide, disinfectant, sanitizer, bleach, water treatment, swimming pool, cooling towers, textile/laundry, hard surface cleaner, mildewicide, drinking water disinfectant, boat bottoms, agricultural (see label for all approved uses & instructions).

NSF Approval: Yes. Certified to ANSI/NSF Standard 60. Maximum use in Potable Water is 84 mg/L for 12.5% bleach and 100 mg/L for 10-10.5% bleach.

USDA (NSF) Approval: Yes. Aqua Guard Chlorinating Solution, Aqua Guard Sanitizer & Aqua Guard Bleach.

SECTION 2 HAZARD INGREDIENTS/IDENTITY INFORMATION

Hazardous Ingredient(s): Sodium Hypochlorite % (w/w) as Sodium Hypochlorite : 10-16%

Exposure Standards: None established for Sodium Hypochlorite, as Chlorine exposure standards are:

PEL (OSHA): 1 ppm as Cl₂

STEL (OSHA): 3 ppm as Cl₂

TLV (ACGIH): 0.5 ppm as Cl₂

TWA (ACGIH): 0.5 ppm as Cl₂

WEEL (AIHA): 2 mg/m³, 15 minute TWA as Cl₂

STEL (ACGIH): 1 ppm as Cl₂

Emergency Overview: May cause burns to the eyes, skin and mucous membranes.

SECTION 3 PHYSICAL/CHEMICAL CHARACTERISTICS

Alternate Name(s):	Bleach
Chemical Name:	Sodium Hypochlorite
Chemical Family:	Oxidizing Agent
Molecular Formula:	Na-O-Cl
Form:	Liquid
Appearance:	Water clear to a slight greenish-yellow, or light yellow aqueous solution
Odor:	Chlorine odor
pH:	11-14, dependent upon % weight as Sodium Hypochlorite
Vapor Pressure:	Not available
Vapor Density (Air=1):	Not available
Boiling Point:	Approximately 230° F (110° C)
Freezing Point:	14 F (8% w/w Cl ₂ solution), 7 F (10% w/w Cl ₂ solution), -3 F (12% w/w Cl ₂ solution)
Solubility (Water):	Completely Soluble
Solubility (Other):	Reacts with Many Organic Solvents
Density:	Appx. 10 lbs. per gallon
Evaporation Rate:	Not Available
Specific Gravity:	1.126 (8% w/w Cl ₂ solution), 1.163 (10% w/w Cl ₂ solution), 1.202 (12% w/w Cl ₂ solution), 1.25 (15% w/w Cl ₂ solution)
Molecular Weight:	74.5

SECTION 4 STABILITY & REACTIVITY DATA

Chemical Stability	Stable <u> X </u>	Unstable <u> </u>
Incompatibility (Conditions to Avoid): Stability decreases with heat and light exposure.		
Incompatibility (Materials to Avoid): May react violently with strong acids. Other incompatibles include strong caustics, ammonia, urea, reducing agents, organics, ether and oxidizable materials. Reaction with metals (nickel, iron, cobalt and copper) may produce oxygen gas, which supports combustion. May react with organohalogen compounds to form spontaneously combustible compounds. May react explosively with nitro- and chloro-organic compounds as well as acids and reducing agents. Acidification liberates chlorine gas.		
Hazardous Decomposition or Byproducts: Chlorine gas. Decomposes with heat and reacts with acids. Hazardous gases/vapors produced are hypochlorous acid, chlorine and hydrochloric acid. Composition depends upon temperature and decrease in pH. Additional decomposition products, which depend on pH, temperature and time, are sodium chloride and chlorate, and oxygen.		
No Mechanical Shock or Impact	No Static Discharge	Oxidizer: YES
Hazardous Polymerization	May Occur	Will Not Occur <u> X </u>

Note: Sodium Hypochlorite reacts violently with amines and ammonium salts. Solutions are reactive with common cleaning products such as toilet bowl cleaners, rust removers, vinegar, acids, organics and ammonia products to produce hazardous gases such as chlorine and other chlorinated species.

SECTION 5 POTENTIAL HEALTH EFFECTS AND FIRST AID INFORMATION

GENERAL: May cause immediate pain. Exposure to the skin may cause sensitization or other allergic responses. If the eye is not irrigated immediately after it has been exposed permanent eye damage may occur. Strict adherence to first aid measures following any exposure is essential. SPEED IS ESSENTIAL!

ROUTE(S) OF ENTRY AND POTENTIAL HEALTH EFFECTS	EMERGENCY & FIRST AID PROCEDURES
INHALATION: Strong irritating to mucous membranes in the nose, throat and respiratory tract. Prolonged contact can cause chronic irritation, pulmonary edema and central nervous system depression. Repeated inhalation exposure may cause impairment of lung function and permanent lung damage.	If inhaled, move exposed person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. If breathing is difficult, have trained person administer oxygen. Call a poison control center or medical physician for further treatment advice. Have the product label or MSDS with you when calling or going for medical treatment.
SKIN CONTACT: Prolonged and repeated exposure to dilute solutions often causes irritation, redness, pain and drying and cracking of the skin. Human evidence has indicated that an ingredient in this product can cause skin sensitization. Depending upon the concentration and how soon after exposure the skin is washed with water, skin contact may cause burns and tissue destruction.	If on skin or clothing, take off all contaminated clothing and rinse skin immediately with plenty of water for 15-20 minutes. If irritation persists, repeat flushing. Do not transport victim unless the recommended irrigation period is completed unless flushing can be continued during transport. Call a poison control center or medical physician for treatment advice. Have the product label or MSDS with you when calling or going for medical treatment.
EYE CONTACT: Strongly irritating to eyes. Exposure to vapor can cause tearing, conjunctivitis and burning of the eyes. Eye contact may cause a corneal injury. The severity of the effects depend on the concentration and how soon after exposure the eyes are washed with water. In severe exposure cases, glaucoma, cataracts and permanent blindness may occur.	If in eyes, hold eye open and rinse slowly and gently with plenty of water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye for 10-15 minutes. Do not transport victim until the recommended flushing period is completed unless irrigation can be continued during transport. Call a poison control center or medical physician for further treatment advice. Have the product label and/or MSDS with you when calling or going to medical treatment.
INGESTION: Corrosive. Can cause severe corrosion of and damage to the gastrointestinal tract (including mouth, throat, and esophagus). Exposure is characterized by nausea, vomiting, diarrhea, abdominal pain, diarrhea, bleeding, and/or tissue ulceration.	If swallowed, call poison control center or medical physician immediately for treatment advice. Have the product label or MSDS with you when calling or going for medical treatment. Have exposed person sip a glass of water if able to swallow, and dilute immediately by giving milk, melted ice cream, starch paste or antacids such as milk of magnesia. Avoid sodium bicarbonate because of carbon dioxide release. DO NOT INDUCE VOMITING, LAVAGE OR ACIDIC ANTIDOTES unless told to do so by poison control center or medical physician. DO NOT give anything by mouth to an unconscious person. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer more water.

NOTE TO PHYSICIAN(S): Pre-existing medical conditions may be aggravated by exposures affecting target organs. There are no known chronic effects. Probable mucosal damage may contraindicate the use of gastric lavage. In addition to the alkalinity of this product, the continued generation of chlorine gas after ingestion can damage further the stomach mucous, depending on the amount ingested. Consideration may be given to removal of the product from the stomach, taking care to avoid perforation of esophagus or stomach. An ounce of 1% sodium thiosulfate or milk of magnesia is helpful.

SECTION 6 TOXICOLOGICAL DATA

ANIMAL DATA	Inhalation 0.25-hour LC50 -	10.5 mg/L in rats
	Acute Dermal LD50 -	10,000 mg/kg in rabbits
	Acute Oral LD50 -	8910 mg/kg in rats

SUMMARY: The concentrated solution is corrosive to skin, and a 5% solution is a severe eye irritant. Solutions containing more than 5% available chlorine are classified by DOT corrosive (please see section 10 of this MSDS). Toxicity described in animals from single exposures by ingestion include muscular weakness, and hypoactivity. Repeated ingestion exposure in animals caused an increase in the relative weight of adrenal glands in one study, but no pathological changes were observed in two other studies. Long-term administration of compound in drinking water of rats caused depression of the immune system. No adverse changes were observed in an eight week dermal study of a 1% solution in guinea pigs. Tests in animals demonstrate no carcinogenic activity by either the oral or dermal routes. Tests in bacterial and mammalian cell cultures demonstrate mutagenic activity.

CARCINOGENICITY: None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as carcinogen.

MUTAGENICITY: Sodium Hypochlorite has been shown to produce damage to genetic material when tested in vitro. Studies in vivo have shown no evidence of mutagenic potential for this material. It is judged that the risk of genetic damage is insignificant for sodium hypochlorite because of its biological activity, lack of mutagenicity in vivo, and failure to produce carcinogenic response.

SECTION 7 FIRE AND EXPLOSION HAZARD DATA

Flash Point: This product does not flash		Flammable Limits (Lower): Not Applicable	
Flammable Limits (Upper): Not Applicable		Auto Ignition Temperature: Not Applicable	
Decomposition Temperature: 40°C (into NaCl & NaClO ₃)		Rate of Burning: Not Available	
Explosive Power: Not Available	Sensitivity to Mechanical Impact: Not expected to be sensitive to mechanical impact	Sensitivity to Static Discharge: Not expected to be sensitive to static discharge	
Fire and Explosion Hazards: This material is non-flammable but is decomposed by heat and light, causing a pressure build-up which could result in an explosion. When heated, it may release chlorine gas or hydrochloric acid. Vigorous reaction with oxidizable or organic materials may result in fire.		Extinguishing Media: Use agents appropriate for surrounding fire. Foam, dry chemical, carbon dioxide, water fog or spray. If leak or spill has not ignited, use water spray to disperse the vapors and to protect persons attempting to stop the leak.	
Fire Fighting Procedures: Water spray should be used to cool containers and may be used to knock down escaping vapor. Remove storage vessels from the fire zone.		Fire Fighting Protective Equipment: Full protective clothing, including a NIOSH approved self-contained breathing apparatus, must be worn in a fire involving this material. Toxic gas vapors are produced upon decomposition.	

SECTION 8 ECOLOGICAL INFORMATION

The toxicity and corrosivity of this product is a function of concentration and the concentration's pH.

ECOTOXICOLOGICAL INFORMATION: Toxic to aquatic life. 96-hour LC50: fathead minnows: 0.090-5.9 mg/L, bluegill sunfish: 0.10-2.48 mg/L, shore crab: 1.418 mg/L, grass shrimp: 52.0 mg/L, scud: 0.145-4.0 mg/L, water flea: 2.1 mg/L.

ENVIRONMENTAL EFFECTS: Do not contaminate domestic or irrigation water supplies, lakes, streams, ponds, or rivers. May be an aesthetic nuisance due to color. Mammals and birds, exposed wildlife would be subject to skin irritation and burns due to the corrosive nature of this material.

SECTION 9 DISPOSAL CONSIDERATIONS

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State, and Local regulations. Do not burn. Do not flush to surface water or sanitary sewer system.

SECTION 10 TRANSPORT INFORMATION

U.S. DOT Basic Shipping Description: Hypochlorite Solutions, 8, UN1791, III

U.S. DOT Hazardous Substance: Yes, RQ 100 pounds (Sodium Hypochlorite)

U.S. DOT Marine Pollutant: No

U.S. DOT Required Label: Corrosive (see column 6, 49 CFR §172.101)

U.S. DOT Exception: Yes, if package meets the criteria of a limited quantity or consumer commodity as defined by 49 CFR §171.8, §173.144 and .154, and §172.312 and .316

N. AMERICAN EMERGENCY GUIDE PAGE NUMBER: 154

Transportation Emergency Phone Numbers: CHEMTREC 1-800-424-9300

SECTION 11 PRECAUTIONS FOR SAFE HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Take all precautions to avoid personal contact. Keep container closed except when transferring material. Locate safety shower and eyewash station close to chemical handling area. Use normal good industrial hygiene and housekeeping practices, wash thoroughly after handling.

Store in a cool, dry, well-ventilated area, away from incompatibles and direct light. Keep container properly labeled at all times. Vented containers must be used and must be kept closed when not being used. Long-term storage is impossible without decomposition. Only use containers made from tinted glass, polyethylene & FRP.

PROCESS HAZARDS: Not Available

STORAGE TEMPERATURE: Store containers below 29°C and above freezing point. Do not expose sealed containers above 40°C. Store in the dark at the lowest possible temperature, but keep from freezing, to slow-down decomposition.

SECTION 12 EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Full handling precautions should be taken at all times. Provide good room ventilation plus local exhaust at points of emission and low level floor exhaust in immediate handling area. Where engineering controls are not feasible, use adequate local exhaust ventilation wherever mist, spray or vapor may be generated.

PERSONAL PROTECTIVE EQUIPMENT:

Eye Protection: Use full face-shield and chemical safety goggles when there is potential for contact (splashing) – ANSI Z87.1

Skin Protection: Gloves and protective clothing (apron, boots, and bodysuits) made from rubber, vinyl, neoprene or PVC. Standard work clothing closed at the neck and wrist while wearing impervious equipment.

Respiratory Protection (Specify Type): A NIOSH/MSHA approved air purifying respirator with an acid gas cartridge or canister may be permissible under circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is potential for uncontrolled releases, exposure levels are not known, or other circumstances where air purifying respirators may not provide adequate protection.

Other: Emergency eyewash and shower station must be provided within the immediate work area. ANSI Z358.1.

SECTION 13 ACCIDENTAL RELEASE MEASURES

Ventilate enclosed area. Collect product for recovery or disposal. For release to land, contain discharge by constructing dikes or applying inert absorbent; for release to water, utilize damming and/or water diversion to reduce the spread of contamination; and, for release to air, vapors may be suppressed by the use of a water fog. All run-off water must be captured for treatment and disposal. Collect contaminated soil and water, and absorbent for disposal. Notify applicable government authority if release is reportable or could adversely affect the environment. **Deactivating Chemicals:** Sodium Sulfite, Sodium Thiosulfate and Sodium Bisulfite

SECTION 14 REGULATORY INFORMATION

OSHA CLASSIFICATION, 29 CFR §1900-1910:**Physical Hazards:** Reactivity, Oxidizer**Health Hazards:** Acute - Skin Sensitizer, Corrosive**CERCLA AND SARA REGULATIONS, 40 CFR §300-373:****Reportable Quantity** = 100 lb.**CERCLA Hazardous Material:** Yes**Title III Hazard Classifications:** Acute - yes, Chronic - no, Fire - yes, Reactivity - yes & Sudden Release of Pressure - No. This product may be reportable under the requirements of 40 CFR §370. Please consult those regulations for details.**SARA Extremely Hazardous Substance:** No**SARA Toxic Chemical:** No**EPA "CLEAN AIR ACT":** This product does not contain nor is it manufactured with ozone depleting substances.**EPA Pesticide:** These products are registered with the U.S. EPA as a pesticide, as required under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). It is shipped under a FIFRA approved product label. It is a violation of Federal law to use this product for pesticidal applications in a manner inconsistent with the FIFRA labeling.**NPCA-HMIS RATING:** HEALTH: 3 FLAMMABILITY: 0 REACTIVITY: 2**NFPA RATING:** NONE AT THIS TIME

SECTION 15 REFERENCES

The Merck Index, 11th ed., Merck and Co., Inc., Rahway, New Jersey, 1989.

Suppliers' Material Safety Data Sheets

Olin and OxyChem Sodium Hypochlorite Handbook

Chlorine Institute Sodium Hypochlorite Pamphlet #96

This information contained herein, while not guaranteed, is offered only as a guide to the handling of this specific material and has been prepared in good faith by product knowledgeable personnel. This information is not intended to be all-inclusive as to the manner and conditions of use, handling and storage. Other factors may involve other or additional safety or performance considerations. Though Allied Universal Corporation is happy to respond to questions regarding safe handling of Allied's products, safe handling and use remains the responsibility of the product's consumers and/or customers. No warranty of merchantability or fitness for purpose, or any other kind, express or implied, is made regarding performance, stability or otherwise. Allied Universal Corp. will not be liable for any damages, losses, injuries or consequential damages that may result from the use of or reliance on any information contained herein. No suggestions for use are intended as, and nothing herein shall be construed as a recommendation to infringe any existing patents or violate any federal, state or local laws, rules, regulations or ordinances.

MATERIAL SAFETY DATA SHEET

HYDROFLUOROSILICIC ACID

USAC CODE NO. 5H05, 5H06 ORIGINAL ISSUE DATE: 3/79 REVISED: 11/97

I. IDENTIFICATION

PRODUCT NAME: HYDROFLUOROSILICIC ACID
 COMMON NAME(S): Fluorosilicic Acid; (FSA)
 CAS NO.: 16961-83-4 FORMULA: H₂SiF₆
 UN/NA NO.: 1778
 DOT HAZARD CLASS: Corrosive Material
 SHIPPING NAME: Fluorosilicic Acid

MANUFACTURER:
 U.S. Agri-Chemicals Corporation
 3225 State Road 630 West
 Fort Meade, FL 33841-9799
 (941) 285-8121
 Emergency Telephone Number: 1-800-424-9300

II. INGREDIENTS AND RECOMMENDED OCCUPATIONAL EXPOSURE LIMITS

INGREDIENTS	%WT	EXPOSURE LIMITS	
		OSHA-PH.EL.	ACGIH - TLV
Hydrofluorosilicic Acid (CAS # 16961-83-4)	10-30	Not Applicable	Not Applicable
Fluoride, as F (CAS # Not Applicable)	0-1	Not Applicable	Not Applicable
Water (CAS # 7732-18-5)	70-90	Not Applicable	Not Applicable

III. PHYSICAL DATA

BOILING POINT (°F)	225°F	SPECIFIC GRAVITY (H ₂ O = 1)	1.175 (25% acid)
MELTING POINT (°F)	1.4 - 4	PERCENT VOLATILE BY VOLUME (%)	Not Applicable
VAPOR PRESSURE (mm Hg)	24 @ 77°F (25 acid)	pH, 10% Solution	1.5 - 2.0%
VAPOR DENSITY (AIR=1)		SOLUBILITY IN WATER	Complete
APPEARANCE AND COLOR: Colorless to straw colored fuming liquid; pungent, sour penetrating odor.			

IV. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (method used): Not Applicable.	LEL	UFL
FLAMMABLE LIMITS: Will not ignite.	Not Applicable	Not Applicable
EXTINGUISHING MEDIA: Any media such as CO ₂ or water required for surrounding fire.		
SPECIAL FIRE FIGHTING PROCEDURES: Cool containers with water using fog nozzles. Dry chemicals and CO may be used safely. Wear acid-proof personal protective gear and use self-contained breathing protection. Hydrofluorosilicic acid reacts with many metals giving off highly flammable hydrogen gas which may form explosive mixtures.		

V. STABILITY AND REACTIVITY

STABILITY	Unstable	X	CONDITIONS TO AVOID: Heating increases vapor pressure.
	Stable		
INCOMPATIBILITY (materials to avoid): Combustible solids, organic peroxides, metals, glass, stoneware, alkali, strong concentrated acids such as sulfuric and perchloric acids.			
HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen fluoride and silicon tetrafluoride on heating. Hydrogen on contact with metals which may form explosive mixtures with air.			
Hazardous Polymerization	May Occur		CONDITIONS TO AVOID: Not Applicable.
	Will Not Occur	X	

VI. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIALS IS RELEASED: Dike, dilute with water to prevent evolution of toxic fumes and slowly neutralize, preferably with limestone. Prevent discharge into sewers and waterways.
In case of release to the environment report spills to 800 - 424-8802, The National Response Center.

WASTE DISPOSAL METHOD EPA Waste Identification No. D002

If uncontaminated, recover and reuse as product. Consult local, state or federal environmental regulatory agencies for acceptable disposal procedures and disposal locations. Do not dispose of in waterways or sewers. If contaminated with other materials, the nature and extent of contamination may require use of specialized disposal methods.

For hazardous waste regulations call 800 - 424- 9346, the RCRA Hotline.

VII. HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE FOR IMMEDIATE (ACUTE) AND DELAYED (CHRONIC) HEALTH: Intake of 6 mg or more/day may result in brittleness of bones, anemia, weakness, stiffness of joints and progressive changes in teeth and skeleton (IARC 27, 237: 1982 and Dreisbach, Handbook of Poisoning, Lange Publ., 1980, page 212). Available evidence (experimental and epidemiological) is inadequate for an evaluation of the carcinogenicity of fluorides. Allergic responses to fluoride have been reported but the role of fluoride in these responses has been questioned. Reproductive abnormalities were reported in animals after high doses of fluorides (IARC, 27, 237:1982).

Inhalation: Exposure may lead to severe irritation, corrosion and congestion of the respiratory system. Bronchospasm, pulmonary edema, anorexia, nausea, vomiting, constipation, weight loss, weakness, shortness of breath and stiffness of joints may occur. **Skin Contact:** Severe irritation, dermatitis and burns can occur. **Eye Contact:** Severe irritation, burns and keratoconjunctivitis can occur. **Ingestion:** Vomiting, diarrhea, thirst, cyanosis and those symptoms reported for inhalation can occur.

EMERGENCY AND FIRST AID PROCEDURES:

Inhalation: Immediately remove from exposure. If breathing or has stopped, administer artificial respiration and/or oxygen as indicated. Seek medical aid promptly.

Skin Contact: Remove contaminated clothing. Copiously irrigate with water, and wash skin thoroughly with soap and water. Seek medical aid promptly.

Eye Contact: Flush immediately with large amounts of water for 15 minutes, lifting the lower and upper lids occasionally. Immediately seek medical aid.

Ingestion: Do not induce vomiting. Give 1-2 large glasses of milk or water. If vomiting occurs, repeat treatment. Ingested acid must be diluted as soon as possible. Immediately seek medical aid.

VIII. SPECIAL PROTECTION INFORMATION

RESPIRATORY: Use respiratory protection approved by NIOSH/MSHA appropriate to magnitude and type of exposure to avoid excessive inhalation.

SKIN: Neoprene gloves and vinyl protective clothing should be used to prevent skin contact. A face shield should be used when appropriate to prevent facial contact.

EYE: Employees should be required to wear chemical safety goggles to prevent eye contact.

VENTILATION: Local exhaust ventilation should be used to control releases of air contaminants in the work place. General dilution ventilation may enhance the reduction of air contaminant concentrations.

OTHER PROTECTIVE EQUIPMENT: Emergency eye wash stations and deluge safety showers should be available in the work area place.

IX. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Store in closed plastic containers in cool, dry, ventilated area away from direct heat. Keep away from fire, sparks or flames. Do not use metal, glass or stoneware. Wear full protective clothing for handling.

This information is taken from sources or based upon data believed to be reliable; however, U.S. Agri-Chemicals Corporation makes no warranty as to the absolute correctness or sufficiency of any of the foregoing or that additional or other measures may not be required under particular conditions.

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NSF Product and Service Listings

These Listings were Last Updated on **Thursday, July 03, 2003** at 4:15 AM Eastern Time.
Please contact NSF International to confirm the status of any Listing, report errors, or make suggestions.

Warning: NSF is concerned about fraudulent downloading and manipulation of website text. If you have received this listing in hard copy, always confirm this certification/listing information by going directly to <http://www.nsf.org/Certified/PwsChemicals/Listings.asp?CompanyName=Allied+Universal&> for the latest most accurate information.

ANSI/NSF STANDARD 60 Drinking Water Treatment Chemicals - Health Effects

**ALLIED UNIVERSAL
CORPORATION**
3901 NW 115 AVENUE
MIAMI, FL 33178
800-981-6700

Plant at: WEST MEMPHIS, AR

Chlorine[CL]
Trade Designation
Chlorine

<i>Product Function</i>	<i>Max Use</i>
Disinfection & Oxidation	30 mg/L

[CL] The residual levels of chlorine (hypochlorite ion and hypochlorous acid), chlorine dioxide, chlorate ion, chloramine and disinfection by-products should be monitored in the finished drinking water to ensure compliance to all applicable regulations.

Sodium Hydroxide
Trade Designation
Caustic Soda
Sodium Hydroxide

<i>Product Function</i>	<i>Max Use</i>
Corrosion & Scale Control	100 mg/L
Corrosion & Scale Control	100 mg/L

Sodium Hypochlorite[CL]
Trade Designation
Aqua Guard Bleach
Aqua Guard Chlorinating Solution
Aqua Guard Sanitizer

<i>Product Function</i>	<i>Max Use</i>
Disinfection & Oxidation	84 mg/L
Disinfection & Oxidation	100 mg/L
Disinfection & Oxidation	100 mg/L

[CL] The residual levels of chlorine (hypochlorite ion and hypochlorous acid), chlorine dioxide, chlorate ion, chloramine and disinfection by-products should be monitored in the finished drinking water to ensure compliance to all applicable regulations.

Hydroflosilicic Acid	Fluoridation	6mg/L
Silicofluoric Acid	Fluoridation	6mg/L
Sodium Hydroxide		
<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Caustic Soda	Corrosion & Scale Control	100mg/L
Rayon Grade Caustic Soda 50%	Corrosion & Scale Control	100mg/L
Sodium Hydroxide	Corrosion & Scale Control	100mg/L
Sodium Hypochlorite[CL]		
<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Aqua Guard Bleach	Disinfection & Oxidation	84mg/L
Aqua Guard Chlorinating Solution	Disinfection & Oxidation	100mg/L
Aqua Guard Sanitizer	Disinfection & Oxidation	100mg/L

[CL] The residual levels of chlorine (hypochlorite ion and hypochlorous acid), chlorine dioxide, chlorate ion, chloramine and disinfection by-products should be monitored in the finished drinking water to ensure compliance to all applicable regulations.

Plant at: RATTLESNAKE POINT, FL

Chlorine[CL]		
<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Chlorine	Disinfection & Oxidation	30 mg/L

[CL] The residual levels of chlorine (hypochlorite ion and hypochlorous acid), chlorine dioxide, chlorate ion, chloramine and disinfection by-products should be monitored in the finished drinking water to ensure compliance to all applicable regulations.

Sodium Hydroxide		
<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Caustic Soda	Corrosion & Scale Control	100 mg/L
Rayon Grade Caustic Soda 50%	Corrosion & Scale Control	100mg/L
Sodium Hydroxide	Corrosion & Scale Control	100 mg/L

Sodium Hypochlorite[CL]		
<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Aqua Guard Bleach	Disinfection & Oxidation	84 mg/L
Aqua Guard Chlorinating Solution	Disinfection & Oxidation	100 mg/L
Aqua Guard Sanitizer	Disinfection & Oxidation	100 mg/L

[CL] The residual levels of chlorine (hypochlorite ion and hypochlorous acid), chlorine dioxide, chlorate ion, chloramine and disinfection by-products should be monitored in the finished drinking water to ensure compliance to all applicable regulations.

Plant at: BRUNSWICK, GA

Plant at: FORT PIERCE, FL**Chlorine[CL]***Trade Designation*

Chlorine

Product Function

Disinfection & Oxidation

Max Use

30 mg/L

[CL] The residual levels of chlorine (hypochlorite ion and hypochlorous acid), chlorine dioxide, chlorate ion, chloramine and disinfection by-products should be monitored in the finished drinking water to ensure compliance to all applicable regulations.

Fluosilicic Acid*Trade Designation*

Fluorosilicic Acid

Hydrofluosilicic Acid

Silicofluoric Acid

Product Function

Fluoridation

Fluoridation

Fluoridation

Max Use

6 mg/L

6 mg/L

6 mg/L

Sodium Hydroxide*Trade Designation*

Caustic Soda

Rayon Grade Caustic Soda 50%

Sodium Hydroxide

Product Function

Corrosion & Scale Control

Corrosion & Scale Control

Corrosion & Scale Control

Max Use

100 mg/L

100mg/L

100 mg/L

Sodium Hypochlorite[CL]*Trade Designation*

Aqua Guard Bleach

Aqua Guard Chlorinating Solution

Aqua Guard Sanitizer

Product Function

Disinfection & Oxidation

Disinfection & Oxidation

Disinfection & Oxidation

Max Use

84 mg/L

100 mg/L

100 mg/L

[CL] The residual levels of chlorine (hypochlorite ion and hypochlorous acid), chlorine dioxide, chlorate ion, chloramine and disinfection by-products should be monitored in the finished drinking water to ensure compliance to all applicable regulations.

Plant at: MIAMI, FL**Chlorine[CL]***Trade Designation*

Chlorine

Product Function

Disinfection & Oxidation

Max Use

30mg/L

[CL] The residual levels of chlorine (hypochlorite ion and hypochlorous acid), chlorine dioxide, chlorate ion, chloramine and disinfection by-products should be monitored in the finished drinking water to ensure compliance to all applicable regulations.

Fluosilicic Acid*Trade Designation*

Fluorosilicic Acid

Product Function

Fluoridation

Max Use

6mg/L

Chlorine[CL]*Trade Designation*

Chlorine

Product Function

Disinfection & Oxidation

Max Use

30 mg/L

[CL] The residual levels of chlorine (hypochlorite ion and hypochlorous acid), chlorine dioxide, chlorate ion, chloramine and disinfection by-products should be monitored in the finished drinking water to ensure compliance to all applicable regulations.

Fluosilicic Acid*Trade Designation*

Fluorosilicic Acid

Hydrofluosilicic Acid

Silicofluoric Acid

Product Function

Fluoridation

Fluoridation

Fluoridation

Max Use

6 mg/L

6 mg/L

6 mg/L

Sodium Hydroxide*Trade Designation*

Caustic Soda

Rayon Grade Caustic Soda 50%

Sodium Hydroxide

Product Function

Corrosion & Scale Control

Corrosion & Scale Control

Corrosion & Scale Control

Max Use

100 mg/L

100mg/L

100 mg/L

Sodium Hypochlorite[CL]*Trade Designation*

Aqua Guard Bleach

Aqua Guard Chlorinating Sol.

Aqua Guard Sanitizer

Product Function

Disinfection & Oxidation

Disinfection & Oxidation

Disinfection & Oxidation

Max Use

84 mg/L

100 mg/L

100 mg/L

[CL] The residual levels of chlorine (hypochlorite ion and hypochlorous acid), chlorine dioxide, chlorate ion, chloramine and disinfection by-products should be monitored in the finished drinking water to ensure compliance to all applicable regulations.

Plant at: RANGER, GA**Chlorine[CL]***Trade Designation*

Chlorine

Product Function

Disinfection & Oxidation

Max Use

30 mg/L

[CL] The residual levels of chlorine (hypochlorite ion and hypochlorous acid), chlorine dioxide, chlorate ion, chloramine and disinfection by-products should be monitored in the finished drinking water to ensure compliance to all applicable regulations.

Sodium Hydroxide*Trade Designation*

Caustic Soda

Sodium Hydroxide

Product Function

Corrosion & Scale Control

Corrosion & Scale Control

Max Use

100 mg/L

100 mg/L

Sodium Hypochlorite[CL]*Trade Designation**Product Function**Max Use*

Aqua Guard Bleach	Disinfection & Oxidation	84 mg/L
Aqua Guard Chlorinating Sol.	Disinfection & Oxidation	100 mg/L
Aqua Guard Sanitizer	Disinfection & Oxidation	100 mg/L

[CL] The residual levels of chlorine (hypochlorite ion and hypochlorous acid), chlorine dioxide, chlorate ion, chloramine and disinfection by-products should be monitored in the finished drinking water to ensure compliance to all applicable regulations.

Plant at: ELLISVILLE, MS

Chlorine[CL]		
<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Chlorine	Disinfection & Oxidation	30 mg/L

[CL] The residual levels of chlorine (hypochlorite ion and hypochlorous acid), chlorine dioxide, chlorate ion, chloramine and disinfection by-products should be monitored in the finished drinking water to ensure compliance to all applicable regulations.

Sodium Hydroxide		
<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Caustic Soda	Disinfection & Oxidation	100 mg/L
Sodium Hydroxide	Disinfection & Oxidation	100 mg/L

Sodium Hypochlorite[CL]		
<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Aqua Guard Bleach	Disinfection & Oxidation	84 mg/L
Aqua Guard Chlorinating Sol.	Disinfection & Oxidation	100 mg/L
Aqua Guard Sanitizer	Disinfection & Oxidation	100 mg/L

[CL] The residual levels of chlorine (hypochlorite ion and hypochlorous acid), chlorine dioxide, chlorate ion, chloramine and disinfection by-products should be monitored in the finished drinking water to ensure compliance to all applicable regulations.

ALLIED UNIVERSAL CORPORATION

3901 NW 115 AVENUE

MIAMI, FL 33178

800-981-6700

Plant at: # 1 USA

Calcium Hypochlorite[1] [CL]		
<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Aqua Guard	Algicide	15mg/L

Disinfection & Oxidation

- [1] All Listed Calcium Hypochlorite product from this location is Certified whether or not it bears the NSF Mark.
- [CL] The residual levels of chlorine (hypochlorite ion and hypochlorous acid), chlorine dioxide, chlorate ion, chloramine and disinfection by-products should be monitored in the finished drinking water to ensure compliance to all applicable regulations.

Number of matching Manufacturers is 2
Number of matching Products is 56
Processing time was 0 seconds

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Envirodyne Inc.

4805 N.W. 2nd Ave
Boca Raton, FL 33
561-989-5
edyne@bellsouth

CERTIFICATE OF ANALYSIS

Allied Universal
3901 NW 115th Avenue
Miami, FL 33178

July 25,
Report: 2003/07302C Arne
Revision Date: October 1,
Sample No: 2003/0730

Attention: Jim Palmer

Project: Lee County Bleach Analysis
Tampa, FL

SAMPLE ID: Bleach Sample*

Collected by: Dabney Smith

Collected on: 07/16/03

Received on: 07/16/03

PARAMETER	RESULT	METHOD	DL UNITS	DATE	ANAL
Copper	U	200.7	0.010 mg/L	07/22/03	K
Iron	U	200.7	0.010 mg/L	07/16/03	A
Nickel	U	200.7	0.010 mg/L	07/16/03	A
Bromate	25	CI	0.10 mg/Kg	07/18/03	D
Chlorate	U	300.0	2000 mg/L	07/23/03	D
Chlorine as NaClO by weight	11.1324		0.1 %	07/16/03	J
Sediation Rate-Vacuum Filtration	52		seconds	07/22/03	D
Specific Gravity	1.1624	SM2710F		07/16/03	J
Sodium Hydroxide	0.2753		0.10 %	07/16/03	J

Analyses contained herein conform to EPA, Standard Methods and DEP approved methods, unless otherwise noted. Subcontracted analyses are denoted by certification number in the analyst column. All relevant quality assurance samples were within specified control limits unless otherwise stated. Uncertainties for test results are available upon request. Envirodyne certifies its test results meet all requirements of the NELAC Standards, where applicable. For questions, please call the project manager at the number listed above.

This is the last page of the report. See bottom of page for total pages.

Adrian D. Mocani

Project Manager

Suzanne Chan

Quality Assurance Officer

* All analyses for Lee County Bleach Sample for bid number Q-040024 (Envirodyne Project Number 2003/07302C) was performed by Envirodyne personnel at its own facility and meets specifications of this bid.

U=Analyte not detected
DL=Detection Limit

QA/QC Review
Laboratory Certification N

TELEPHONE:
(305) 888-2623 Local
FL
(305) 463-8369 Fax

Ellisville, MS

SHIPPING POINTS:
Miami, Ft. Pierce, Tampa,

Brunswick, Ranger, GA
W. Memphis, AR;

ALLIED UNIVERSAL CORPORATION

CORPORATE OFFICE:
3901 N.W. 115TH AVENUE
MIAMI, FL 33178

REFERENCES SODIUM HYPOCHLORITE

MIAMI DADE WATER & SEWER
VIRGINIA KEY
MIAMI, FL
DARYL FRAZIER
(305) 365-5642

CITY OF COOPER CITY
11791 S.W. 49 STREET
COOPER CITY, FL
GEORGE GARBER
(954) 680-1445

City of Sunrise
14100 SW 8 St.
Sunrise, FL 33325
Walter Girard
(954) 846-7400

City of Plantation
6500 NW 11 Pl.
Plantation, FL
Hank Breitenkamp
(954) 797-2203

City of Dania Beach
1201 Sterling Rd.
Dania Beach, FL
(954) 924-3747
Jim Baker

City of Miramar
4101 SW 136 Ave.
Miramar, FL 33027
(954) 438-1228
Bill Nee

City of Cocoa
375 N. Cocoa Blvd.
Cocoa, FL
(321) 639-7680
Gary Parker

MANATEE COUNTY SOUTH WWTP
5101 65 STREET WEST
BRADENTON, FL 34210
CHRIS COLLINS
(941) 791-8811/EXT. 5179

MANATEE NORTH WWTP
8500 69TH STREET EAST
PALMETTO, FL 34221
CHRISTOPHER WEST
(941) 795-3424

Manatee Water Plant
18315 Dam Road
Bradenton, FL 34202
(941) 746-3020/Ext. 23

Manatee Southeast Regional
Lena Road
Bradenton, FL 34206
Dalton Cook
(941) 748-4978

City of Tampa
17101 Bruce B. Downs
2700 Maritime Blvd.
7125 North 30 St.
920 E. 131 Ave.
Tampa, FL
(813) 247-3451/Ext. 246
Tony Madera

Skylake WTP
502 W. Sandlake Road
Kirkman WTP
4070 S. Kirkman Rd.
Conway WTP
2725 S. Conway Rd.
Orlando, FL
(407) 384-4170
Ed Lawson



3901 NW 115 Avenue
Miami, Florida 33178
305-888-2623 office
305-463-8369 fax

December 9, 2003

The following bleach bids were cancelled early:

The City of Orlando

Charlotte County

Lee County

Catherine Guillarmod
Executive Administrator

/cg

3901 NW 115 Avenue
Miami, Florida 33178
305-888-2623

9501 Rangeline Road
Ft. Pierce, Florida 34987
772-464-6195

30 Neil Gunn Drive
Ellisville, MS 39437
601-477-2550

5215 W. Tyson Avenue
Tampa, Florida 33611
813-832-4868

8350 NW 115 Avenue
Miami, Florida 33166
305-888-2623

204 SCM Road
Brunswick, GA 31525
912-267-9470

1405 Possum Hollow Road
Ranger, GA 30734
706-334-7377

2100 Port Road
West Memphis, AR 72301
870-732-3107

Incident Report # 701484

INCIDENT DESCRIPTION

*Report taken by: CIV DAVIS at 14:38 on 03-OCT-03

Incident Type: RAILROAD

Incident Cause: UNKNOWN

Affected Area:

The incident occurred on 03-OCT-03 at 14:30 local time.

Affected Medium: AIR ATMOSPHERE

SUSPECTED RESPONSIBLE PARTY

Name: CHARLES WIGHT

Organization: ALLIED UNIVERSAL CORP Address: 8350 NW 93RD ST

MIAMI, FL 33166

PRIMARY Phone: (305)8882623

Type of Organization: PRIVATE ENTERPRISE

INCIDENT LOCATION

5215 WEST TYSON AVE County: HILLSBOROUGH City: TAMPA State: FL

RELEASED MATERIAL(S)

CHRIS Code: CLX Official Material Name: CHLORINE

Also Known As:

Qty Released: 0 UNKNOWN AMOUNT

DESCRIPTION OF INCIDENT

MATERIALS RELEASED FROM A TANK CAR, DUE TO AN UNKNOWN CAUSE.

INCIDENT DETAILS

Grade Crossing: NO

Location Subdivision: CHEMICAL FORMULATORS

Railroad Milepost: UNKNOWN

Type of Vehicle Involved:

Crossing Device Type:

Device Operational: YES

DOT Crossing Number:

Date and Time Service was/will be Restored:

Brake Failure: NO

---RAILROAD INFORMATION---

Railroad Involved:

Train Number: UNKNOWN

Train Type: OTHER Train Direction:

Train Speed: Track Speed:

Locomotives: Cars: Derailed:

Suspected DOT Regulation Non Compliance: NO

DERAILED CARS:

Pos.	Car number	Type	Cargo
------	------------	------	-------

DAMAGES

Fire Involved: NO Fire Extinguished: UNKNOWN

INJURIES: Hospitalized: Empl/Crew: Passenger:
 FATALITIES: Empl/Crew: Passenger: Occupant:
 EVACUATIONS: 30 Who Evacuated: EMPLOYEES Radius/Area:
 Damages:

Closure Type	Description of Closure	Length of Closure	Direction of Closure	Major Artery:
Air:	N			
Road:	N			N
Waterway:	N			
Track:	N			

REMEDIAL ACTIONS

REPAIRS MADE.

Release Secured: YES Release Rate: Estimated Release Duration:

WEATHER

Weather: SUNNY, 80°F

ADDITIONAL AGENCIES NOTIFIED

Federal:

State/Local:

State/Local On Scene:

State Agency Number:

NOTIFICATIONS BY NRC

DOT CRISIS MANAGEMENT CENTER	03-OCT-03 14:44	(202)3661863
FEDERAL RAILROAD ADMIN.	03-OCT-03 14:46	RAMOS (202)4936214
U.S. EPA IV	03-OCT-03 14:46	R4 DUTY OSC (404)5628700
EPA IV FOR FLORIDA ATTN: T STILLMAN	03-OCT-03 14:44	
NOAA 1ST CLASS BB RPTS FOR FL	03-OCT-03 14:44	(206)5266344
NATIONAL RESPONSE CENTER HQ	03-OCT-03 14:46	JOHN (202)2672100
NTSB PIPELINE	03-OCT-03 14:44	(202)3146293
DOI FOR REGION 4 ATTN: MR. HOGUE	03-OCT-03 14:44	(404)3314524
RSPA OFFICE HAZARDOUS MATERIALS	03-OCT-03 14:48	FAWCETT (202)3661863
RSPA OFFICE HAZARDOUS MATERIALS	03-OCT-03 14:44	(202)3661863
STANDING JOINT FORCE HQ HOMELAND	03-OCT-03 14:44	(757)8368273

STANDING JOINT FORCE HQ HOMELAND

03-OCT-03 14:44

(757)8365212

FL EMERGENCY RESPONSE COMMISSION

03-OCT-03 14:44

(850)4139911

ADDITIONAL INFORMATION

NO ADDITIONAL INFORMATION.

*** END INCIDENT REPORT # 701484 ***

ADDENDUM #1/FORMAL QUOTATION NO.: Q-040024
LEE COUNTY, FLORIDA
PROPOSAL QUOTE FORM
FOR THE ANNUAL PURCHASE OF
CHEMICALS FOR UTILITIES

ATTACHMENT

8

DATE SUBMITTED: 12/15/03

VENDOR NAME: Bounty Mid-South

TO: The Board of County Commissioners
Lee County
Fort Myers, Florida

Having carefully examined the "General Conditions", and the "Detailed Specifications", all of which are contained herein, the Undersigned proposes to furnish the following which meet these specifications:

The undersigned acknowledges receipt of Addenda numbers:

GRAND TOTAL (ALL SECTIONS): \$ 69,079.40

WILL YOU DELIVER WITH YOUR OWN VEHICLE AS OPPOSED TO COMMON CARRIER?

YES NO

SECTION 1, ANHYDROUS AMMONIA

Specify product name: _____

\$ No Bid EA. X 60.6 tons = Total Cost \$ _____

SECTION 1A, ANHYDROUS AMMONIA

Specify product name: _____

\$ No Bid EA. X 4 (150# cylinders) = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 2, ANIONIC POLYMERS

Specify product name: _____

\$ No Bid EA. X 24,000 lbs = Total Cost \$ _____

Manufacturer _____ **PolyFloc AP 1100P, or equal**

MINIMUM ORDER QUANTITY: _____

SECTION 3, AQUA AMMONIA 18%

Specify product name: _____

\$ No Bid EA. X 8,000 gallons = Total Cost \$ _____

Manufacturer _____

MINIMUM ORDER QUANTITY: _____

SECTION 4, BENTONITE CLAY ACCUFLOC SDG

Specify product name: _____

\$ No Bid EA. X 500 lbs = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 5, CALCIUM HYPOCHLORITE 3 inch stabilized tablets

Specify product name: _____

\$ No Bid EA. X 24 (100# pails) = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 6, CITRIC ACID

Specify product name: Citric Acid Anhydrous 99.5% AOM

\$.73/lb EA. X 500 lbs = Total Cost \$ 365.00

MINIMUM ORDER QUANTITY: 10 bags

SECTION 7, HYDRATED LIME

Specify product name: Hydrated Lime

\$ _____ EA. X 6,480 (50# bags) = Total Cost \$ _____

MINIMUM ORDER QUANTITY: 40 bags

SECTION 8, HYDROCHLORIC ACID 31% (muriatic acid)

Specify product name: Muriatic Acid

\$ 1.21/GAL EA. X 4,800 gallons (275 gal. totes) = Total Cost \$ 5808.00

Manufacturer PVS

SECTION 8A, HYDROCHLORIC ACID 31% (muriatic acid)

Specify product name: _____

\$ 1.72 EA. X 420 gallons (15 gal. carboys) = Total Cost \$ 722.40

Manufacturer PVS

SECTION 8B, HYDROCHLORIC ACID 31% (muriatic acid)

Specify product name: _____

\$ No Bid EA. X 244 gallons (1 gal. jugs) = Total Cost \$ _____

Manufacturer _____

MINIMUM ORDER QUANTITY: _____

SECTION 9, HYDROFLUOSILIC ACID 23%

Specify product name: _____

\$ No Bid EA. X 13,000 gallons = Total Cost \$ _____

Specify product name : _____

MINIMUM ORDER QUANTITY: _____

SECTION 9A, HYDROFLUOSILIC ACID 23%

Specify product name: _____

\$.15/lb EA. X 15 (275 gal. Totes) = Total Cost \$ 6,187.50

Specify product name : _____

SECTION 10, POLYMER (LIQUID)

Specify product name: _____

\$ No Bid EA. X 2,000 lbs = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 11, POTASSIUM PERMANGANATE

Specify product name: _____

\$ 1.92/lb EA. X 2,000 lbs = Total Cost \$ 3,840.00

MINIMUM ORDER QUANTITY: 5 pails

SECTION 12, PYRO-PHOSPHATE

Specify product name: _____

\$ No Bid EA. X 18,000 lbs = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 13, SODA ASH

Specify product name: Soda Ash Dense

\$ 9.25/bag EA. X 98 (50# bags) = Total Cost \$ 906.50

MINIMUM ORDER QUANTITY: _____

SECTION 13A, SODA ASH

Specify product name: _____

\$ 200/TN EA. X 200 tons = Total Cost \$ 40,000

MINIMUM ORDER QUANTITY: 25 Tons

SECTION 14, SODIUM HYPOCHLORITE SOLUTION

Specify product name: _____

\$ No Bid EA. X 450,000 gallons = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 14A, SODIUM HYPOCHLORITE SOLUTION

Specify product name: _____

\$ No Bid EA. X 20 (55 gal. drums) = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 15, SODIUM METABISULFITE

Specify product name: Sod. Metabisulfite Fl

\$ 22.50/bag EA. X 500 (50# bags) = Total Cost \$ 11,250

MINIMUM ORDER QUANTITY: 2 bags

SECTION 16, ZINC ORTHO- PHOSPHATE

Specify product name: _____

\$ No Bid EA. X 49,000 lbs = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

TO BE STARTED WITHIN 15 CALENDAR DAYS AFTER RECEIPT OF AWARD AND PURCHASE ORDER.

Is your firm interested in being considered for the Local Vendor Preference?

Yes _____ No ✓

If yes, then read the paragraph entitled "Local Vendor Preference" included in these specifications. Also complete the Local Vendor Preference Questionnaire and return with your quotation.

Quoters should carefully read all the terms and conditions of the specifications. Any representation of deviation or modification to the quote may be grounds to reject the quote.

Are there any modifications to the quote or specifications:

Yes _____ No ✓

Failure to clearly identify any modifications in the space below or on a separate page may be grounds for the quoter being declared nonresponsive or to have the award of the quote rescinded by the County.

MODIFICATIONS:

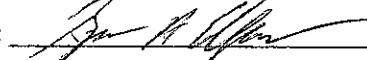
Quoter shall submit his/her quote on the County's Proposal Quote Form, including the firm name and authorized signature. Any blank spaces on the Proposal Quote Form, qualifying notes or exceptions, counter offers, lack of required submittals, or signatures, on County's Form may result in the Quoter/Quote being declared non-responsive by the County.

ANTI-COLLUSION STATEMENT

THE BELOW SIGNED QUOTER HAS NOT DIVULGED TO, DISCUSSED OR COMPARED HIS QUOTE WITH OTHER QUOTERS AND HAS NOT COLLUDED WITH ANY OTHER QUOTER OR PARTIES TO A QUOTE WHATSOEVER. NOTE: NO PREMIUMS, REBATES OR GRATUITIES TO ANY EMPLOYEE OR AGENT ARE PERMITTED EITHER WITH, PRIOR TO, OR AFTER ANY DELIVERY OF MATERIALS. ANY SUCH VIOLATION WILL RESULT IN THE CANCELLATION AND/OR RETURN OF MATERIAL (AS APPLICABLE) AND THE REMOVAL FROM THE MASTER BIDDERS LIST.

FIRM NAME Brentay Mid-South

BY (Printed): Bryce A. Elledge

BY (Signature): 

TITLE: District Operations Manager

FEDERAL ID # OR S.S.# 61-054545

ADDRESS: 250 Central Florida Parkway
Orlando, FL 32824

PHONE NO.: 407-857-9310

FAX NO.: 407-851-3512

CELLULAR PHONE/PAGER NO.: 321-239-7713

LEE COUNTY OCCUPATIONAL LICENSE NUMBER: _____

E-MAIL ADDRESS: Orlando@brentay.com

REVISED: 7/28/00

Fax



To: Chevone Peterson

From: Bryce Elledge
Brenntag Mid-South, Inc.

Fax: 239-344-5460

Fax: (407) 851-3512

Date: 12/19/03

Telephone: (407) 857-9310

Number of pages: 1

E-Mail: belledge@brenntag.com

Listed below are the specific product names for sections 8A and 13A for bid # Q-040024.

Section 8A product Name: **Muriatic Acid**

Section 13A product name: **Soda Ash Dense**

Please let me know if there is any further information that you need.

Regards,

Bryce Elledge

Fax



To: Chevone Peterson

From: Bryce Elledge
Brenntag Mid-South, Inc.

Fax: 239-344-5460

Fax: (407) 851-3512

Date: 12/23/03

Telephone: (407) 857-9310

Number of pages: 46

E-Mail: belledge@brenntag.com

Chevone,

Attached you will find:

The required submittals for Bid # Q-040024.
MSDS for quoted products
Typical COA and Specification sheet designating NSF certification for Lime.

Safety incidents in the last 5 years consist of :

5/11/00 – 900# chlorine release from a one ton cylinder at the Brenntag Orlando facility , 250 Central FI Pkwy, Orlando FI 32824.

6/23/03 – Sodium Hypochlorite 10% solution storage tank rupture at the Brenntag Orlando facility , 250 Central FI Pkwy, Orlando FI 32824. Loss of 1000 gl into an onsite retention pond.

Please call me with any questions.

Merry Christmas,

Bryce Elledge

Submittals for Lee County Bid # Q-040024

Technical Spec : H (Successful Bidder Emergency)

- Local Emergency Contact Name: Bryce Elledge (321) 239-7713
- 24 Hour # 207-830-1222



Carmeuse North America
 11 Stanwix Street, 11th Floor
 Pittsburgh, PA 15222
 Phone: 412-995-5500
 Fax: 412-995-5594

Date of Origin:	06/05/02
Date of Revision:	03/26/03
Revision No.	1

Material Safety Data Sheet

Product Name:	HYDRATED LIME
---------------	----------------------

INFOTRAC: 800-535-5053 [In case of an emergency call this number 24 HOURS a day 7 DAYS a week.]

1. IDENTIFICATION OF THE SUBSTANCE AND COMPANY

1.1. Identification of the substance:

- Chemical name: Calcium hydroxide
- Product name: Hydrated Lime, High Calcium Hydrated Lime, Slaked Lime
- Formula: Ca(OH)₂
- C.A.S N°: 1305-62-0
- Molecular Weight: 74.08

1.2. Company:

Carmeuse North America 11 Stanwix Street, 11 th Floor Pittsburgh, PA 15222	Telephone: 412-995-5500 Fax: 412-995-5594
---------------------------------------------------------------------------------------------	----------------------------------------------

2. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	% by Weight	C.A.S N°:	Exposure Limits
Calcium oxide	>68	1305-78-8	2 mg/m ³
Magnesium oxide	<4.5	1309-48-4	10 mg/m ³
Silica (Total)	<2.0	7631-86-9	0.1 mg/m ³ (respirable)

(This product may contain above >0.1% respirable silica dust)

3. HAZARD CLASSIFICATIONS

- Irritant:** To the eyes, mucous membranes and to the skin (in case of sweating).
- Flammability:** The product is not flammable or combustible.
- Explosive:** None
- Reactivity:** Reacts with strong acids produce heat and possible explosion in confined spaces.
- Symbols:** WHMIS Symbol: "E" Corrosive Material; "D2A" Materials causing other toxic effects.

4. FIRST AID SYMPTOMS AND TREATMENTS (Continued on page 2)

- Effects:**
- Inhalation: Irritations, sore throat, cough, sneezing.
 - Eyes: Severe irritation, intense tearing, burns and possible blindness when exposure is prolonged.
 - Skin: Removes natural skin oils, blotches, itching and superficial burns in case of sweating.
 - Ingestion: Sore throat, stomach aches, cramps, diarrhea, vomiting.

Product Name:

HYDRATED LIME (continued)**4. FIRST AID SYMPTOMS AND TREATMENTS (Continued from page 1)****Treatments:**

- Inhalation: Breathe fresh air deeply. If necessary, give artificial respiration and seek medical attention.
- Eyes: Turn up eyelid and wash immediately and abundantly with lukewarm running water for at least 15 minutes. Do not try to neutralize. Obtain medical attention immediately.
- Skin: Remove contaminated clothes and rinse area with plenty of water.
- Ingestion: Drink water followed by diluted vinegar (1 part vinegar in 2 parts water) or fruit juice to neutralize. Do not induce vomiting. Obtain medical attention immediately.

5. FIRE FIGHTING MEASURES

- Classified as a non-flammable product.
- Decomposes itself into Calcium oxide at 580 °C. Calcium oxide is non-flammable, but generates heat in presence of water and acids.
- Safety measures in case of fire: avoid wetting lime, use appropriate extinguishing media to put out a surrounding fire.

6. ACCIDENT PREVENTIVE MEASURES

- Individual and collective precautions:** Avoid contact with skin and eyes; wear waterproof shoes, gloves and safety goggles. Cover body with long sleeved shirt & long pants.
- Avoid inhalation of dust:** Wear anti-dust mask.
- Cleaning methods(Leaks & Spills):** Mechanical dry vacuuming; for small quantities, wash abundantly with water.
- Precautions for the protection of the environment:** The substance may not be spilled without control into surface waters (increases pH)
- Waste Disposal:** Dispose in secure landfill or according to federal, provincial/state and local environmental regulations.

7. HANDLING AND STORAGE

- Handling:** In open air or in ventilated places. Avoid skin and eye contact. Avoid creating airborne dust. Store in dry places, sheltered from humidity.
- Storage:** In waterproof bags or tanks. Keep away from acids and incompatible substances. Keep out of reach of children.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

- Technical Values:** Occupational exposure standard – 5 mg/m³
- Respiratory Protection:** Use a mask in unventilated dusty places.
- Eye Protection:** Use safety goggles
- Hand Protection:** Use clean dry gloves.
- Skin Protection:** Cover body with suitable clothes (long sleeves shirts and trousers covering the waterproof caustic resistant shoes).

Product Name:

HYDRATED LIME (continued)**9. PHYSICAL AND CHEMICAL PROPERTIES**

- Physical State: Solid
- Odor & Appearance: Odorless, White powder
- pH: 12.5-12.8 at a concentration of 1.600 mg/l (saturated solution)
- Melting point: Decomposes at 580° C to form calcium oxide
- Boiling point: Decomposes at 580° C to form calcium oxide
- Flash point: Non flammable
- Autoignition t°: Non flammable
- Inflammability limits: None
- Explosion risk: None
- Vapor pressure (+t°): Non volatile
- Vapor density (air=ml): Non volatile
- Relative density: 350-400 kg/m³
- Solubility: Slightly soluble in water at 20°C: 1.65 g/l
At 100°C: 0.71 g/l
Soluble in acids, glycerin and sugar solutions

10. STABILITY AND REACTIVITY

- Stability: Stable products, not very soluble.
- Decomposition temperature°: 580
- Reactivity: Reacts with acids to form calcium salts while generating heat
- Conditions to avoid: Wet places, vicinity to incompatible materials
- Incompatible materials: Water; acids; reactive fluoridated, brominated or phosphorous compounds; reactive powdered metals; organic acid anydrides; nitro-organic compounds; interhalogenated compounds
- Hazardous decomposition products: None

11. TOXICOLOGICAL INFORMATION

- Toxicity:** Non-toxic substance.
- Exposure Limits:** TWAEV -- 5 mg/cu.m
- Other:** Respirable SiO₂, may be a component of this product and is classified by IARC as a group 1 human carcinogen. No reported Carcinogenicity, Reproductive Effects, Teratogenicity or Mutagenicity.

12. ECOLOGICAL INFORMATION

- Alkaline substance that increases pH to 12.5 at a concentration of 1.60 mg/l.
- Calcium hydroxide shall progressively be rendered soluble and shall recarbonate to form calcium carbonate (CaCO₃).
- Calcium carbonate is ecologically neutral.
- Uncontrolled spillage in surface waters should be avoided since the increase pH could be detrimental to fish.

Product Name:	HYDRATED LIME (continued)
---------------	----------------------------------

13. DISPOSAL CONSIDERATIONS

- Dispose in secure landfill or according to federal, provincial/state and local environmental regulations.

14. TRANSPORTATION INFORMATION

Classification:	TDG	Not listed for ground transportation
	HMR	Not listed for ground transportation

TDG: Transportation of Dangerous Goods Regulation (CAN)
HMR: Hazardous Materials Regulation (USA)

15. REGULATORY INFORMATION

Symbol:	E	Corrosive Material
	D2A	Materials causing other toxic effects
Risk Phases:	Risk of serious damage to the eyes.	
Safety Phases:	Keep out of reach of children. Keep storage container away from humidity. Avoid contact with skin. Avoid contact with eyes. In case of contact with eyes, rinse immediately with water for at least 15 minutes.	

16. MISCELLANEOUS OTHER INFORMATION

The information contained herein is believed to be accurate and reliable as of the date hereof. However, Carmeuse makes no representation warranty or guarantee as to results or as to the information's accuracy, reliability or completeness. Carmeuse has no liability for any loss or damage that may result from use of the information. Each user is responsible to review this information, satisfy itself as to the information's suitability and completeness, and circulate the information to its employees, customers and other appropriate third parties.



November 1, 2002

CERTIFICATE OF COMPLIANCE

Brenntag Mid-South, Inc.
250 Central FL Parkway
Orlando, FL

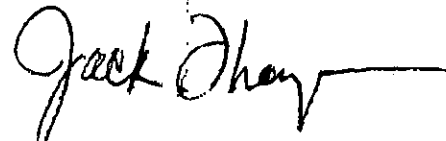
LONGVIEW HYDRATED LIME - 50# BAGS

This is to certify that Carmeuse Lime Inc. - Longview Division's lime complies with specifications as specified by The American Water Works Association (ANSI/AWWA B202-93 or latest revision thereof) and ANSI/NSF (National Sanitation Foundation) Standard 60.

Sworn to and subscribed before me this 1st day of November, 2002.


Notary Public

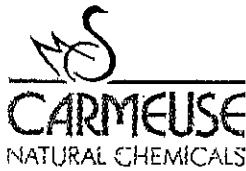
**CARMEUSE LIME
LONGVIEW DIVISION**



Jack Thompson
Area Sales Manager

Carmeuse Lime
LONGVIEW OPERATION
500 Highway 31
Seymour, AL 36517

Tel: (205) 664 7100
Fax: (205) 665-7138
Internet: www.carmeuseusa.com



REISSUED: June 01, 2002

ANSI / NSF STANDARD 60 CLASSIFICATION

Underwriters Laboratories, Inc. has classified the following Carmeuse Lime manufacturing locations and their products for use as drinking water treatment additives.

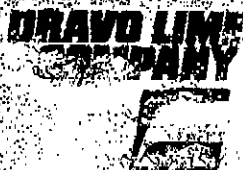
<u>Location</u>	<u>Product / Trade Designation</u>	<u>Categories</u>	<u>Maximum Use</u>
Carmeuse Lime BEACHVILLE OPERATION P.O. Box 190 Ingersoll, Ontario, N5C 3K5 Canada	Calcium Oxide	Softening, Precipitation, and pH Adjustment	500 mg/L
	Calcium Hydroxide	Softening, Precipitation, and pH Adjustment	650 mg/L
Carmeuse Lime DETROIT OPERATION 310 Fordson Street Detroit, Michigan 48120	Calcium Oxide	Softening, Precipitation and pH Adjustment	500 mg/L
Carmeuse Lime RIVER ROUGE OPERATION 25 Manon Avenue River Rouge, Michigan 48218	Calcium Oxide	Softening, Precipitation, and pH Adjustment	500 mg/L
Carmeuse Lime S. CHICAGO OPERATION 3245 East 103 rd Street Chicago, Illinois 60617	Calcium Oxide	Softening, Precipitation and pH Adjustment	500 mg/L
	Calcium Hydroxide	Softening, Precipitation, and pH Adjustment	650 mg/L
Carmeuse Lime BUFFINGTON OPERATION North Clark Road at Lake Michigan Gary, Indiana 46420	Calcium Oxide	Softening, Precipitation, and pH Adjustment	500 mg/L
Carmeuse Lime HANOVER OPERATION 877 Oxford Road Hanover, PA 17331	Calcium Oxide	Softening, Precipitation and pH Adjustment	500 mg/L
			650 mg/L
Carmeuse Lime ANNVILLE OPERATION Route 422 and Clear Spring Road Annville, PA 17003	Calcium Oxide	Softening, Precipitation, and pH Adjustment	500 mg/L
	Calcium Hydroxide	Softening, Precipitation, and pH Adjustment	650 mg/L
Carmeuse Lime BLACK RIVER OPERATION 9043 Highway 154 Butler Kentucky 41008	Calcium Oxide	Softening, Precipitation, and pH Adjustment	500 mg/L
	Calcium Hydroxide	Softening, Precipitation and pH Adjustment	650 mg/L
Carmeuse Lime LONGVIEW OPERATION 599 Highway 31 South Saginaw, Alabama 35137	Calcium Oxide	Softening, Precipitation, and pH Adjustment	500 mg/L
	Calcium Hydroxide	Softening, Precipitation, and pH Adjustment	650 mg/L

For questions concerning water treatment products,
please contact: Lance Olson
Area Sales Manager, Northern Region
(708) 757-1244



The complete listing of Carmeuse Lime plants can also be viewed at
the Underwriters Laboratories web site: <http://www.ul.com>

In the UL website, go to: **Certifications-Drinking Water Treatment Additives.**



THE FOLLOWING IS A TYPICAL
ANALYSIS OF LONGVIEW CHEMICAL HYDRATED LIME

MAGNESIUM OXIDE	2.00%
LOSS ON IGNITION	24.44%
AVAILABLE LIME INDEX	71.20%
AVAILABLE CALCIUM HYDROXIDE	95.93%
PASSING 325 MESH	90.00%
IRON & ALUMINUM OXIDES	0.50%
CARBON DIOXIDE	0.27%
CaCO-3	0.61%
SILICA PLUS ACID INSOLUBLES	0.75%
WATER INSOLUBLES RETAINED ON 325 MESH SIEVE	0.50%

LONGVIEW DIVISION

P. O. Box 37
Sugonaw, AL 35137
Phone: 205-663-0788
FAX: 205-663-1030

A Division of Dravo Corporation

DRAVO LIME COMPANY
Longview Division
P.O. Box 37 Highway 31 South
Saginaw, AL 35137
800-633-4889 - 205-664-2456
FAX 205-664-7183



**THE FOLLOWING IS AN AVERAGE
ANALYSIS OF LONGVIEW CHEMICAL HYDRATED LIME**

AVAILABLE LIME INDEX	Average 70.22%
PASSING 325 MESH	87.40%

Note:

- **Analysis based on 1998 Production Test Data**

The information contained in this data sheet is, to the best of our knowledge, true and accurate, but any typical values given are subject to occasional variations as the raw material is a quarried product.

Hyd emm

March 22, 1999





CERTIFICATE OF ANALYSIS

BRENNTAG
HENDERSON, KY

ATTN: BRENDA
FAX #: (270) 830-1367

DATE: N/A
SLIP #: N/A
P.O. #: R99144
LOT #: VH-060501

PRODUCT: VERTICAL HYDRATED LIME

PROPERTIES	SPECIFICATIONS	ANALYSIS	PROCEDURE
% Ca(OH) ₂	(96.5 min)	97.97	MLCO #24
MINUS 325 MESH	(96.5 min)	97.94	MLCO #72
% MOISTURE	(1.0 max)	0.4	MLCO #13
% LOSS ON IGNITION			

MISSISSIPPI LIME COMPANY

CHIEF CHEMIST: MARK DeGENOVA BY:

David Wibbenmeyer

LABORATORY TECHNICIAN

FAX: (573) 883-4039
PHONE: (573) 883-4034

MATERIAL SAFETY DATA SHEET

Issue Date: October 12, 2001

IDENTITY (As used on label and list)

Citric Acid Anhydrous USP/FCC

Section I

Manufacturers Name
Archer Daniels Midland Co
Address
P.O. Box 1470
Decatur Illinois 62525

Emergency Telephone number
910-457-5011
Telephone Number for Information
217-451-7418

Section II - Hazardous Ingredients/ Identity Information
Hazardous Components (Chemical Identity; Common Name)**Hazard Data**
OSHA PEL

Citric Acid, 2-Hydroxy-1,2,3-propanetricarboxylic acid

8-hr TWA for nuisance
particulate

Cas No. 77-92-9 C₆H₈O₇
orl-rat LD₅₀ 11,700 mg/kg
dermal acute 500mg/24hr moderate
Eye 750 mg/24hr severe

15 mg/m³ (total dust)
5 mg/m³ (resp. fract.)
ACGIH TLV
TWA: 10mg/m³ (nuisance particulate)

Section III - Physical/Chemical Characteristics

Boiling Point
Decomposes

Specific Gravity (H₂O = 1)
1.665

Vapor Pressure (mm Hg)
Not applicable - solid

Melting Point
153°C

Vapor Density (Air = 1)
Not applicable

Evaporation Rate (Butyl Acetate = 1)
>1

Solubility in water
Greater than 50%

Appearance and Odor
White odorless powder and/or granules

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used)
Ignition temp. 1000 - 1020°C
Opt. 65 g/cuft

Flammable Limits LEL UEL
Min. 8 g/cuft 0.28 2.29 kg/m³

Extinguishing Media
Water, carbon dioxide, foam, powder extinguisher.

Special Fire Fighting Procedures

Fire fighters wear protective clothing and NIOSH approved respirator.

Unusual Fire and Explosion Hazards

None - At optimum air concentration Bureau of Mines Relative: Explosive rating = Weak

HMIS rating

Health, 1, Flammability, 1, Reactivity, 0

This MSDS is based upon a limited review of ADM files and standard Toxicological handbooks.

The information herein is furnished without warranty of any kind. This information should only be used as a supplement to information already in your possession concerning the product. The determination of whether and under what conditions the product should be used by your employees is yours to make.

Section V - Reactivity Data

MSDS Citric Acid Anhydrous USP/FCC pg2

Stability Stable Unstable

Stable under normal conditions.

Conditions to Avoid

None known

Incompatibility (Materials to Avoid)Metal nitrates, carbonate, bicarbonates and strong oxidizers
Citric acid corrodes copper, zinc, aluminum and their alloys**Hazardous Decomposition or Byproducts**

None known

Hazardous polymerization

Will not occur

May Occur Will Not Occur

Conditions to Avoid

Avoid generating dust.

Section VI - Health Hazard Data**Routes of Entry:**

Skin contact, Ingestion, Inhalation of mist.

Inhalation Skin Ingestion

Health Hazards (Acute and Chronic)

Prolonged contact with the product may cause irritation.

Carcinogenicity

No

NTP?

No

IARC Monographs?

No

OSHA Regulated?

No

Signs and Symptoms of Exposure

May be slight eye irritant, long-term exposure to skin could be a mild irritant.

Medical Conditions Generally Aggravated by Exposure

No information available.

Emergency and First Aid Procedures

Eyes-immediately flush with plenty of water for 15 minutes. Call a physician.

Skin-wash area with water, remove contaminated clothing and launder before reuse.

Section VII - Precautions for Safe Handling and Use**Steps to Be Taken in Case of Material is Released or Spilled**

Recover by vacuum or broom and shovel. Flush area with water to remove final traces.

Waste Disposal Method

Conform to applicable federal, state and local regulations.

Landfill or neutralize and flush to drain. Material is biodegradable in waste treatment facility.

Precautions to Be Taken in Handling and Storing

Store in a dry area.

Other Precautions

Aqueous solutions of Citric Acid can, if in contact with reactive metal (iron, zinc, aluminum) form hydrogen which form explosive mixtures.

Section VIII - Control Measures**Respiratory Protection (Specify Type)**

NIOSH approved chemical respirator with dust and mist filter while handling crystalline material and concentrated solutions.

Ventilation

Local exhaust sufficient to control dust.

Local Exhaust**Mechanical (General)****Special****Other****Protective Gloves**

Standard work gloves

Eye Protection

Safety Glasses

Other Protective Clothing or Equipment

None



ADM SPECIALTY INGREDIENTS CERTIFICATE OF ANALYSIS

SHIPPED TO: 071113
BRENNTAG
250 CENTRAL FLORIDA PKWY
ORLANDO FL

PRODUCT DESCRIPTION: CITRIC ACID ANHYD FG USP FCC
ADM PRODUCT CODE: 020420
CUSTOMER PRODUCT CODE:

LOT NUMBER: S311243

CUSTOMER PO #: R43937

COPC: 9535

SHIP DATE: 12/19/03
SHIPPED FROM: SOUTHPORT ,NC
TRAILER/CAR NUMBER:
ADM ORDER NUMBER: 509338
INVOICE NUMBER:

MANUFACTURE DATE: 11/24/03 TEST DATE: 11/24/03
EXPIRATION DATE: 11/24/06
QUANTITY SHIPPED: 798 QTY
CONTAINER CODE: OH DESC: 50# BAG
NET WEIGHT: 39,900.000 #

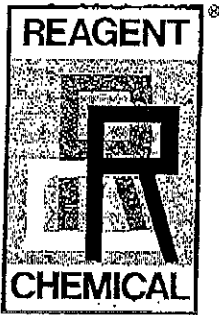
THIS PRODUCT COMPLIES WITH PH EUR, BP, USP, FCC, JP & FAO/WHO FOOD ADDITIVE SPECIFICATIONS. IT OCCURS AS COLORLESS, TRANSLUCENT CRYSTALS OR AS A WHITE, GRANULAR TO FINE CRYSTALLINE POWDER. IT IS ESSENTIALLY ODORLESS AND HAS A STRONGLY ACID TASTE.

ITEM IDENTIFICATION	RESULT PASSES TEST	LIMIT PASSES TEST	REFERENCE USP/FCC
ASSAY	100.10 %	99.5-100.5 %	USP/FCC
WATER	0.06 %	<0.5 %	USP/FCC
RESIDUE ON IGNITION	<0.025 %	<0.05 %	USP/FCC
ULTRAVIOLET ABSORBANCE	COMPLIES	COMPLIES	FCC
READILY CARBONIZABLE SUBSTANCES	PASSES TEST	PASSES TEST	USP/FCC
OXALATE	PASSES TEST	PASSES TEST	USP/FCC
HEAVY METALS	<5 MG/KG	<5 MG/KG	USP/FCC
LEAD	<0.5 MG/KG	<0.5 MG/KG	FCC
SULFATE	PASSES TEST	PASSES TEST	USP
ARSENIC	<1 PPM	<1 PPM	USP
ORGANIC VOLATILE IMPURITIES	COMPLIES	COMPLIES	USP
TRIDODECYLAMINE	COMPLIES	COMPLIES	FCC
ON USS 30 MESH	0.2 %	<3 %	ADM
MESH, % THROUGH #100	1.10 %	<5 %	ADM

JEFFREY L. KING

LAB SUPERVISOR, QUALITY CONTROL

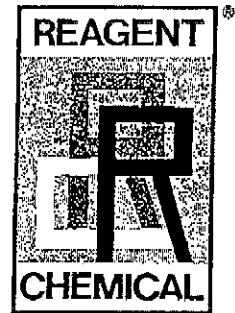
Received
 12.22.03/8
 096121



HYDROCHLORIC ACID

MATERIAL SAFETY DATA BULLETIN

(CONFORMS TO CFR 1910.1200g AMENDED)



**REAGENT CHEMICAL
& RESEARCH INC.**

124 River Road
Middlesex, New Jersey 08846



TRANSPORTATION EMERGENCY PHONE 800-231-1807 800-424-9300 (Chemtrec)		NFPA A = Acid	
PRODUCT NAME Hydrochloric Acid, 20°-22° Baumé		HMS 3-0-0-X X = Consult Safety Dept.	
NON-TRANSPORTATION EMERGENCY PHONE 800-231-1807		SARA TITLE III <input checked="" type="checkbox"/> YES SECTION 312 <input checked="" type="checkbox"/> YES SECTION 313 <input checked="" type="checkbox"/> YES	
PRODUCT CODE NUMBER CAS-7847-01-0		DOT HAZARD CLASS Corrosive Material UN 1789	
RCRA WASTE NUMBER D002		REPORTABLE QUANTITY RQ 5000 lbs.	
CHEMICAL FORMULA HCL		TRADE NAME & SYNONYMS Hydrochloric Acid — Muriatic Acid	
HAZARDOUS INGREDIENTS			
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS OR GASES Hydrogen Chloride		% 31.5-36	CURRENT TLV 5 ppm
PHYSICAL DATA			
APPEARANCE (SOLID, LIQUID, GAS) Liquid @ 20°C and 1 atmos	MOLECULAR WEIGHT 36.5	FREEZING -53° C; -63°F	SPECIFIC GRAVITY 1.1600-1.1789
VAPOR DENSITY (AIR = 1) N.A.	COLOR Clear/slightly yellow	BULK DENSITY 9.671-9.828 Lbs./Gal	BOILING POINT 110°C/230°F
VAPOR PRESSURE 50-80 mm Hg @ 20°C.	SOLUBILITY (water) Very soluble	ODOR Sharp, pungent, irritant	% VOLATILE BY VOL. N.A.
FIRE & EXPLOSION DATA			
FLASH POINT °F (METHOD USED) N.A.	FLAMMABLE LIMIT Non-Flammable	EXTINGUISHING MEDIA N.A.	
SPECIAL FIRE FIGHTING PROCEDURES, UNUSUAL FIRE OR EXPLOSION HAZARDS Non-flammable, but Hydrochloric Acid reacts with all metals, except gold and platinum, with rapid evolution of Hydrogen which is flammable and explosive in air. Firefighters exposed to Hydrochloric Acid vapors should wear Scott Air-Pak or equivalent. Hydrogen Chloride vapors are extremely irritating to the respiratory tract and may cause breathing difficulty.			

received

CHEMICAL REACTIVITY

GENERAL

Hydrochloric Acid is chemically stable when properly contained and handled. It is a strong mineral acid and reacts with many metals and metal oxides and hydroxides to form the equivalent metal chloride. It reacts with zeolites and other silicious compounds to form Hydrosilicic Acid; it reacts with carbonates to form Carbon Dioxide and Water. It is oxidized by Oxygen or electrolysis to form Chlorine, a lethal, poisonous gas. It reacts with alkaline compounds to form a neutral salt. It is a hydrolyzing agent for carbohydrates, esters and other compounds.

The reaction of Hydrochloric Acid with most metals will produce Hydrogen, an explosive, flammable gas.

Violent reactions will result when Hydrochloric Acid reacts with acetic anhydride, 2-aminoethanol, ammonium hydroxide, calcium phosphide, chlorosulfonic acid, ethylene diamine, ethylene imine, oleum (fuming sulfuric acid), perchloric acid, beta propiolactone, propylene oxide, sodium hydroxide, sulfuric acid, uranium phosphide and vinyl acetate. This listing is not all-inclusive.

STABILITY

GENERAL

Hydrochloric Acid is a stable compound and forms an azeotrope that boils at 108.6°C or 227.5°F at one atmosphere and contains 20.22% Hydrogen Chloride.

The gaseous form, Hydrogen Chloride, begins dissociation at 1500°C. or 2732°F.

FIRST AID

GENERAL

If a known exposure occurs or is suspected, immediately initiate the recommended procedures below. Simultaneously contact a physician, the nearest hospital, or the nearest Poison Control Center. Inform the person contacted of the type and extent of exposure, describe the victim's symptoms and follow the advice given. For additional information, call, day or night, Reagent (800) 231-1807 or Chemtrec (800) 424-9300.

INGESTION

DO NOT induce vomiting. Immediately give large quantities of water or milk, if available. If vomiting does occur, give fluids again. Never give anything by mouth to an unconscious person. Call a physician or the nearest Poison Control Center immediately.

EYE CONTACT

Immediately flush the eyes with large quantities of running water for a minimum of 15 minutes. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eyes and lids with water. DO NOT attempt to neutralize with chemical agents. Obtain medical attention as soon as possible. Oils or ointments should not be used. Continue the flushing for an additional 15 minutes if the physician is not immediately available.

SKIN CONTACT

Immediately remove contaminated clothing under a safety shower. Flush all affected areas with large amounts of water for at least 15 minutes. DO NOT attempt to neutralize with chemical agents. Obtain medical advice immediately.

INHALATION

Remove from contaminated atmosphere. If breathing has ceased, clear the victim's airway and start mouth-to-mouth artificial respiration, which may be supplemented by the use of a bag-mask respirator, or a manually-triggered, oxygen supply capable of delivering 1 liter/second or more. If the victim is breathing, oxygen may be administered from a demand-type or continuous-flow inhalator, preferably with a physician's advice. Contact a physician immediately.

TOXICOLOGY

GENERAL

Hydrogen Chloride, both as a gas and in a solution as Hydrochloric Acid, is a corrosive substance and can cause severe and painful burns on contact with any part of the body or if taken internally. The mucous membranes of the eyes and the upper respiratory tract are especially susceptible to the irritating effects of high atmospheric concentrations of Hydrogen Chloride. The gas or vapor is so penetrating and pungent that when high concentrations do occur those exposed should immediately leave the contaminated area.

ROUTES OF ENTRY

Inhalation of the gas or mist; ingestion, eye and skin contact with both the gas and/or mist are possible routes of entry.

INGESTION

When concentrated Hydrochloric Acid is swallowed, it causes severe burns of the mucous membranes of the mouth, esophagus and stomach. The lips and mouth usually turn white, and later brown. There is pain in the throat and stomach, difficulty in swallowing, intense thirst, nausea and vomiting, followed by diarrhea and, in severe cases, by collapse and unconsciousness.

EYE CONTACT

Contact of the eyes with Hydrogen Chloride, either as a gas or in solution, rapidly causes severe irritation and painful burns of the eyes and eyelids. If the acid is not quickly removed by thorough irrigation with water, there may be prolonged or permanent visual impairment or total loss of sight. Wash the affected area for 15 minutes with large amounts of water.

SKIN CONTACT

Concentrated solutions are destructive to clothing and on contact with skin, cause severe burns unless promptly washed off. Repeated skin contact with dilute solutions may lead to the development of dermatitis. Exposure to the concentrated vapor of Anhydrous Hydrogen Chloride may also result in burns or dermatitis.

INHALATION

Inhalation of excessive concentrations of Hydrogen Chloride vapors immediately produces severe irritation of the upper respiratory tract, resulting in coughing, burning of the throat, and a choking sensation. Reactions encountered in man have usually been limited to inflammation and occasional ulceration of the nose, throat and larynx. If inhaled deeply, edema of the lungs may occur.

TOXICOLOGY DATA

(a) Toxicity:

Inhalation, human LCLo: 1300 ppm/30 min.

Oral, rabbit LD₅₀: 900 mg/Kg.

(b) Mutagenic Effects:

Chromosome damage, Inhalation: 100 ppm/24 hours

Chromosome damage, Oral: 100 ppm

Cytogenic effects, Parenteral: 20 mg

(c) OSHA Standard: Air: TLV 5 ppm

Air: TLV 7 mg/cubic meter

(d) ACGH Limit Values: Hydrogen Chloride TWA-STEL 5 ppm

TWA-STEL 7 mg./cu. meter

(e) TOSCA: Reported in TOSCA Inventory in 1980.

NOTE: The sources of the toxicology data are:

1. NIOSH-Registry of Toxic Effects of Chemical Substances 1986 Volumes I-V.
2. Patty-Industrial Hygiene and Toxicology Volume 2-A, B, C.
3. American Conference of Governmental Industrial Hygienists 1988.

The above quoted data are an abstract only of the complete information disclosed in the source documents. Reagent will supply, upon request, photos of the complete source documents referred to herein. Please phone the nearest Reagent Sales Office.

TOXICOLOGY DATA**CARCINOGENIC STATEMENT:**

National Toxicology Register No

IARC Monograph No

OSHA Register No

ACGIH 1987-88 No

SPILL, DISCHARGE OR DISPOSAL

GENERAL

Spills or discharges into the environment involving large quantities of Hydrochloric Acid should be controlled and cleaned-up according to a pre-determined affirmative, written Spill Prevention and Control Program. For assistance in developing a SPCP contact your nearest Reagent Sales Office.

PERSONNEL

All personnel involved in a spill clean-up should follow the recommendations and practices set forth below (refer to Industrial Hygiene).

PROCEDURE

Spills should be handled immediately by neutralization and dilution of the spilled Product by the use of Soda Ash (Sodium Carbonate), Lime (Calcium Hydroxide) or Limestone (Calcium Carbonate) with large amounts of water. For an interior (inside a closed space) spill be aware that the use of Soda Ash, Lime and Limestone will evolve Carbon Dioxide and that ample ventilation be provided.

DISPOSAL

Under Federal RCRA, it is the responsibility of the user of Products to determine, at the time of disposal, whether the Product falls under the RCRA as a hazardous waste. This is because Product uses, transformations, synthesis, mixtures, etc. may render the resulting end-product hazardous.

INDUSTRIAL HYGIENE

EYE CONTACT

Chemical goggles and full face shields must be worn at all times by personnel exposed to or handling Hydrochloric Acid.

SKIN CONTACT

Impervious clothing, gloves, footwear and head gear must be worn at all times by Personnel exposed to or handling Hydrochloric Acid

INHALATION

The use of a NIOSH approved full face piece cartridge respirator or a Scott Air-Pak should be used by all personnel exposed to or handling Hydrochloric Acid.

RESPIRATOR SELECTION:

100 ppm concentration — chemical cartridge respirator with Acid gas cartridge with full face piece.

Escape — self contained breathing apparatus.

BIBLIOGRAPHY SOURCE REFERENCE

1. NIOSH-RTECS—Registry of Toxic Effects of Chemical Substances Volumes I-V — 1986.
 2. American Conference of Governmental Industrial Hygienist — 1988.
 3. Dangerous Properties of Industrial Material, SAX — Edition Six.
 4. Handbook of Toxic and Hazardous Chemicals and Carcinogens, Second Edition, Marshall Sittig.
 5. Industrial Hygiene and Toxicology, Patty — Volumes I-II ABC.
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REVISED April 1992



REAGENT CHEMICAL & RESEARCH INC. 7400 CARMEL EXECUTIVE PARK, SUITE 220, CHARLOTTE, NC 28226
PHONE 704-341-0206 FAX 704-341-4391

**HYDROCHLORIC ACID SPECIFICATIONS
20 DEG BE' FCC GRADE**

PRODUCTION: 22185-47216

TERMINAL: SAVANNAH, GA.

IDENTIFICATION

STRENGTH IN BAUME (MIN)	20.0 DEGREE
% HCl CONTENT (MIN)	31.45%
SPECIFIC GRAVITY @ 60F (MIN)	1.160
COLOR (APHA) (MAX)	15
EXTRACTABLE ORGANIC COMPOUNDS (MAX)	5 PPM
HEAVY METALS AS LEAD (PB) (MAX)	1 PPM
IRON (FE) (MAX)	3 PPM
OXIDIZING SUBSTANCES AS CL2 (MAX)	2 PPM

NOTE: THE HYDROCHLORIC ACID REPRESENTED BY THIS PRODUCTION CONFORMS TO OR EXCEEDS THE REQUIREMENTS SET FORTH BY THE FOOD CHEMICAL CODEX FOURTH EDITION.

REVISED 5-5-98


REAGENT CHEMICAL & RESEARCH, INC.

7400 CARMEL EXECUTIVE PARK

SUITE 220

CHARLOTTE, NC

**CERTIFICATE OF ANALYSIS
HYDROCHLORIC ACID
FOOD CHEMICAL CODEX**

CUSTOMER NAME & ADDRESS BRENNTAG PB & S CHEMICAL TAFT, FL ATTN: WALLY BAZ CODE # R84038	DATE: 12-09-03	CONTROL NUMBER: 128924
	LOT NUMBER: T115120803	QUANTITY: 5000 GALLONS
	T/T NUMBER: CTL T/T	CUSTOMER ORDER #: R43999
	CC: JACK GOODWIN	T11119/PS22188/18045/22185 PRIORITY 22185/22188//18045

THE MATERIAL REPRESENTED BY THIS SAMPLE CONFORMS TO THE FOOD CHEMICAL CODEX FOURTH EDITION.

THIS IS TO CERTIFY THAT TYPICAL SAMPLES OF HYDROCHLORIC ACID HAVE BEEN WITHDRAWN USING STATISTICAL QUALITY CONTROL SAMPLING PROCEDURES AND UPON ANALYSIS IS FOUND TO CONTAIN THE FOLLOWING:

<u>IDENTIFICATION</u>	<u>BRENNTAG SPECIFICATION</u>	<u>SAMPLE</u>
STRENGTH IN BALME'	20.0 MIN	20.60 Be'
% HCL CONTENT	31.45 % MIN	32.58 %
SPECIFIC GRAVITY	-----	1.1656 @ 60°F
COLOR (A.P.H.A)	50 MAX	< 15
EXTRACTABLE ORGANIC COMPOUNDS	-----	< 1 PPM
IRON (Fe)	2 PPM MAX	< 1 PPM
FREE CHLORINE	30 PPM MAX	< 1 PPM

**BRENNTAG MID-SOUTH
ORLANDO LABORATORY
APPROVED**

LOT: 523344

**Patti Hill
QUALITY ASSURANCE
(800) 972-3047**


Quality First
To Do It Right - The First Time and Every Time

Shrieve Chemical Company

1717 Woodstead Court
The Woodlands, Texas 77380

(713) 267-4228
FAX (713) 293-9014

MATERIAL SAFETY DATA SHEET

SECTION I. PRODUCT IDENTIFICATION		
PRODUCT NAME - FLUOROSILICIC ACID CHEMICAL FAMILY - Inorganic Acid SYNONYMS - Fluosilicic acid, hydrofluorosilicic acid, HFS DOT CLASS - Corrosive Material, NA 1778	CAS NO. - MOLECULAR WEIGHT - FORMULA -	16961-83-4 144 H ₂ SiF ₆
SECTION II. COMPOSITION		
HAZARDOUS INGREDIENTS: Fluorosilicic acid	23 - 25	16961-83-4
OTHER INGREDIENTS: Water	75 - 77	7732-18-5
SECTION III. PHYSICAL DATA		
BOILING POINT (25% solution) - 222.5 °F VAPOR PRESSURE, mm Hg, 86 °F - 25 SOLUBILITY IN WATER - Complete pH, 1% solution - 1.2 APPEARANCE AND ODOR - Colorless to pale yellow liquid, pungent irritating odor.	SPECIFIC GRAVITY (H₂O = 1) - 1.2 VAPOR DENSITY (Air = 1) - Not applicable PERCENT VOLATILE 100	
SECTION IV. FIRE AND EXPLOSION HAZARD DATA		
FLASH POINT - Not applicable. FLAMMABLE LIMITS - Not Applicable Fluorosilicic acid is not flammable, and water may be used on fires in which it is involved. However, contact with metals can produce explosive hydrogen gas. Heating fluorosilicic acid will cause release of toxic, irritating and corrosive gases. Firefighters should use self-contained breathing apparatus and full protective clothing.		 NFPA CODE NFPA Hazard Rating Scale 0=Least 1=Slight 2=Moderate 3=High 4=Extreme
SECTION V. REACTIVITY DATA		
STABILITY - Fluorosilicic acid is stable when stored properly.		
INCOMPATIBILITY (Materials to avoid) - Strong alkalis. Some metals will react with solutions of the acid to form explosive hydrogen gas. Glass and ceramics may also be attacked, especially at the air/liquid interface.		
HAZARDOUS POLYMERIZATION will not occur.		

Fluorosilicic Acid

Page 2 of 2

SECTION VI. HEALTH HAZARD DATA

OSHA Permissible Exposure Limit - None established for fluorosilicic acid. We suggest the OSHA PEL or ACGIH TLV of 3 ppm or 2.5 mg/m³ of air for an eight-hour time-weighted-average, as fluoride. Fluorosilicic acid is not considered to be a cancer-causing material by OSHA, NIOSH, or IARC.

EFFECTS OF OVEREXPOSURE:

SHORT TERM: May cause irritation or burns in all parts of the body, including the skin, eyes, throat, lungs, mouth, and intestinal tract.

LONG TERM: Exposures higher than the recommended limits over long periods of time may cause chronic irritation of the nose, throat, and bronchial passage. May cause bone changes (fluorosis) or calcium metabolism disorders.

TOXICITY DATA: Subcutaneous, frog, LDLo: 140 mg/kg.

FIRST AID: Eyes - Immediately flush thoroughly with large amounts of water, including under the eyelids. Get medical attention immediately.

Skin - Immediately wash twice with soap and water. Remove and wash contaminated clothing. Get medical attention if irritation or pain persists after affected area is washed.

Inhalation - Remove to fresh air. Get medical attention if discomfort persists.

Ingestion - Do not induce vomiting. If conscious, give large amounts of water or milk, with milk of magnesia if available. Call a physician immediately.

SECTION VII. SPILL, LEAK, AND DISPOSAL INFORMATION**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:**

Restrict access to the area until completion of cleanup. Do not touch or allow anyone to touch spilled or leaked material. Use acid suits and acid-resistant footwear. Contain spill with dikes if necessary. Collect as much of the spilled material as possible in acid-resistant containers for possible reuse. Absorb the remaining material with sand, vermiculite, or other absorbent material, or neutralize with soda ash, sodium bicarbonate, limestone, or lime, until acidity is neutralized.

WASTE DISPOSAL METHOD:

Consult State or Federal Environmental Protection Agency for accepted disposal procedures and disposal locations. Disposal in streams or sewers may be contrary to regulations.

SECTION VIII. SPECIAL PROTECTION INFORMATION

Where contact with the liquid may occur, acid suits should be worn, including boots, face shields, coats with long sleeves, and rubber gloves. Up to 20 ppm of vapor (as fluoride), a chemical cartridge respirator providing protection against fluoride gases may be used. Above 20 ppm, a self-contained breathing apparatus with a full facepiece should be used, operated in a positive pressure or pressure demand mode.

Local exhaust ventilation is recommended to reduce exposure to vapors to below 3 ppm as fluoride.

A full flow safety shower and eyewash station should be available. Protective equipment should be cleaned thoroughly after each use. Do not touch equipment after use until it has been neutralized.

HMS System:

Health = 3

Flammability = 0

Reactivity = 1

**SECTION IX. SPECIAL PRECAUTIONS**

Maintain adequate ventilation. Train workers in safe handling. Wash thoroughly after working with fluorosilicic acid, especially around fingernails.

Storage tanks or vessels should be provided with secondary containment to minimize environmental contamination in the event of a leak, spill, or other release.

Chemical safety goggles should be worn whenever working near storage tanks or vessels.

Dec 08 03 07:17a

Eilen George

863-285-6931 (160)

P. 1

US AGRI - CHEMICALS

FT. MEADE CHEMICALS LABORATORY

3225 State Road 630 West
Ft. Meade, Fl 33841 - 9799

CERTIFICATE OF ANALYSIS

for
FLUOROSILICIC ACID

SHIPPED TO SHRIEVE/BRENNTAG

DATE 12/8/03

TANK CAR NUMBER:
C/#

256486

LOADING
DATE 12/8/03

CHEMICAL ANALYSIS

P205 0.177

SP.GR. 1.214

H2SIF6 22.7

COLOR 35

**BRENNTAG MID-SOUTH
ORLANDO LABORATORY
APPROVED**

LOT: 523342


AUTHORIZED SIGNATURE

To: 8132486664

From: FMC Corporation

Fax:

TOPCALL at: MAY-05-2003-16:45 Doc: 950 Page: 001



FMC Wyoming Corporation
1733 Market Street
PHILADELPHIA PA 19103
UNITED STATES

CUSTOMER CONTACT & FAX
Dulce 813/248-5779

FOR CUSTOMER SERVICE PLEASE CALL: 1-800-323-7107

1 of 1

Certificate of Analysis

Shipped to: BRENNTAG MID-SOUTH 3520 ADAMO DRIVE TAMPA FL. 33605 UNITED STATES	FMC Order # : 1385280 FMC Delivery # : 655575 Customer Sales Order # : R30637 Vehicle # : PLCX018163 Net weight : 197750 LB
Ship Date: 05-May-2003	Certificate Date : 05-May-2003

Product: SODA ASH GRADE 280 BULK.

Soda Ash Dense

PROPERTY INSPECTION METHOD	SPECIFICATION	BATCH: 0000525573 MFG. DATE: 05-May-2003
Container Identification		PLCX18163
Sodium Chloride as NaCl, %	0.200 Max	0.073
Total Alkalinity as Na2CO3, %	99.20 Min	99.77
US +30 Mesh, Cumulative %		1.0
US +40 Mesh, Cumulative %	27.0 Max	24.6
US +100 Mesh, Cumulative %		99.1
US +200 Mesh, Cumulative %	93.0 Min	99.4
US -200 Mesh, %	7.0 Max	0.6

Authorized By:

Received
06.12.03
013420 50 lb bag
127868 2000 lb bag.

MATERIAL SAFETY DATA SHEET

Sodium Carbonate, Anhydrous



MSDS Ref. No: 497-19-8
Version: US/Canada
Date Approved: 06/06/2002
Revision No: 4

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Sodium Carbonate, Anhydrous
SYNONYM(s): Soda Ash, Sodium Carbonate Anhydrous
GENERAL USE: Glass manufacture, detergent manufacture, sodium chemicals and carbonate chemicals manufacture, pulp and paper, brine treatment, water hardness removal, pH adjustment in water or waste water, flue gas desulfurization, coal treatment, ion exchange resin regeneration.

This chemical is certified to ANSI/NSF Standard 60, Drinking Water Chemicals-Health Effects. The maximum dosage level for this chemical is 150 mg/L.

MANUFACTURER

FMC Wyoming Corporation
Alkali Chemicals Division
1735 Market Street
Philadelphia, PA 19103
General Information: 215-299-6000

Emergency Telephone Numbers:

CHEMTREC (U.S.): (800) 424-9300
Emergency Phone (303)595-9048 (Medical - call collect)
Emergency Phone (307) 875-2580 (Green River, WY-call collect)

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS#</u>	<u>Wt.%</u>
Sodium carbonate	497-19-8	99.8

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

IMMEDIATE CONCERNS: White, granular solid. Product is non-combustible. Reacts with acids to release carbon dioxide gas and heat. Irritating to the eyes. Continuous contact may irritate skin.

POTENTIAL HEALTH EFFECTS: Direct contact with the product causes irritation of the eyes and continuous contact may cause skin irritation (red, dry, cracked skin). Excessive levels of airborne dust may irritate the mucous membranes and upper respiratory tract.

4. FIRST AID MEASURES

EYES: Immediately flush with water for at least 15 minutes, lifting the upper and lower eyelids intermittently. See a medical doctor or ophthalmologist immediately.

SKIN: Wash with plenty of soap and water. Get medical attention if irritation occurs and persists.

INGESTION: Rinse mouth with water. Dilute by giving 1 or 2 glasses of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. See a medical doctor immediately.

INHALATION: Remove to fresh air. If breathing difficulty or discomfort occurs and persists, obtain medical attention.

NOTES TO MEDICAL DOCTOR: While internal toxicity is low, irritant effects of high concentrations may produce corneal opacities, and vesicular skin reactions in humans with abraded skin only. Treatment is symptomatic and supportive.

5. FIRE FIGHTING MEASURES

FLAMMABLE LIMITS: Not applicable

EXTINGUISHING MEDIA: Water, water fog, carbon dioxide (CO₂), dry chemical

HAZARDOUS COMBUSTION PRODUCTS: Fumes of sodium oxide.

FIRE / EXPLOSION HAZARDS: Not applicable

FIRE FIGHTING PROCEDURES: Wear full protective clothing and self-contained breathing apparatus.

AUTOIGNITION TEMPERATURE: Not applicable

PROPERTIES CONTRIBUTING TO FLAMMABILITY: Not applicable

FLASH POINT: Non-combustible

SENSITIVITY TO STATIC DISCHARGE: None

SENSITIVITY TO IMPACT: None

HAZARDOUS DECOMPOSITION PRODUCTS: Heated to decomposition, it emits fumes of sodium oxide.

6. ACCIDENTAL RELEASE MEASURES

GENERAL PROCEDURES: Sweep up and recycle into process if contamination does not

present a problem. Use appropriate protective equipment if dust is generated or contact with eyes or skin is expected. Flush residues and liquid to holding area for neutralization before discharge.

7. HANDLING AND STORAGE

HANDLING: Use air conveying/mechanical systems for bulk transfer to storage. For manual handling of bulk transfer use mechanical ventilation to remove airborne dust from railcar, ship or truck. Use approved respiratory protection when ventilation systems are not available. Selection of respirators is based on the dust cloud generated.

STORAGE: Store in a cool dry area, away from acids.

COMMENTS: Provide general mechanical and/or local exhaust ventilation to prevent release of airborne dust into the work environment. Approved respiratory protection should be used when airborne dust is expected to be released.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Minimize eye and skin contact by using appropriate protective equipment. Use local or general room ventilation to control airborne dust that may be generated into the work environment.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Use cup type chemical goggles.

RESPIRATORY: Use approved dust respirator for low levels of airborne dust. High concentrations may require air supplied systems.

PROTECTIVE CLOTHING: Use impervious gloves to prevent skin contact, arm protectors and aprons. If clothing becomes contaminated, remove and launder before reuse. Industrial safety shoes.

9. PHYSICAL AND CHEMICAL PROPERTIES

ODOR: Odorless

APPEARANCE: White, granular solid.

pH: (1% solution): 11.4

PERCENT VOLATILE: Not applicable

VAPOR PRESSURE: Not applicable

VAPOR DENSITY: Not Applicable

BOILING POINT: Decomposes

FREEZING POINT: 851°C (1564°F)

SOLUBILITY IN WATER: 33.2 % maximum

EVAPORATION RATE: (Butyl Acetate = 1) Not applicable

DENSITY: (g/ml) Dense Grades = 0.86 - 1.12; Light Grades = 0.70 - 0.90

SPECIFIC GRAVITY: 2.509 (water = 1)

COEFF. OIL/WATER: Not applicable

ODOR THRESHOLD: Not applicable

OXIDIZING PROPERTIES: Not applicable

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Contact with acids except under controlled conditions.

STABILITY: Stable

POLYMERIZATION: Will not occur

HAZARDOUS DECOMPOSITION PRODUCTS: None

INCOMPATIBLE MATERIALS: Reacts with acids with release of large volumes of carbon dioxide gas and heat.

COMMENTS: Materials to Avoid : Aluminum powder, acids, fluorine, molten lithium

11. TOXICOLOGICAL INFORMATION

EYE EFFECTS: Severe irritant (rabbit) [Toxicology 23:281 (1982)]

SKIN EFFECTS: Non-irritating to intact skin. Minor irritation may occur on abraded skin. [Toxicol. Appl. Pharmacol. 31:481 (1975)]

DERMAL LD₅₀: No data available for the product.

ORAL LD₅₀: 4090 mg/kg (rat) [RTECS 1986]

INHALATION LC₅₀: 2.3 mg/L (rat, 2 hr) [Environ. Res. 31:138 (1983)]

SENSITIZATION: Non-sensitizing (humans, 0.25% sodium carbonate) [Toxicol. Appl.

Pharmacol. 31:481 (1975)]

TARGET ORGANS: Eyes

ACUTE EFFECTS FROM OVEREXPOSURE: May cause severe irritation of the eyes, including corneal opacities. Dusts and mists may be irritating to the skin, mucous membranes and upper respiratory tract.

CHRONIC EFFECTS FROM OVEREXPOSURE: No data available for the product.

CARCINOGENICITY:

IARC: Not listed

NTP: Not listed

OSHA: Not listed

OTHER: (ACGIH) Not listed

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: Daphnia Magna 96 hr LC50 = 265 - 565 mg/L
Bluegill Sunfish 96 hr LC50 = 300 - 320 mg/L

CHEMICAL FATE INFORMATION: Biodegradability does not apply to inorganic substances.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Salvage as much material as possible and return to process if contamination does not present a problem. Dispose in an accepted landfill in accordance with accepted governmental regulations.

14. TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION (DOT)

PROPER SHIPPING NAME: Not regulated

PRIMARY HAZARD CLASS/DIVISION: Not applicable

UN/NA NUMBER: None

PLACARDS: Not applicable

LABEL: Not applicable

OTHER SHIPPING INFORMATION:

DOT Marking: Not applicable
Hazardous Substance/RQ: Not applicable
49 STCC Number: Not applicable

SPECIAL SHIPPING NOTES: IMDG: Not regulated
IATA: Not regulated

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355): Not listed

SECTION 311 HAZARD CATEGORY (40 CFR 370):
Immediate (Acute) Health Hazard

SECTION 312 THRESHOLD PLANNING QUANTITY (40 CFR 370): 10000 lbs.

SECTION 313 REPORTABLE INGREDIENTS (40 CFR 372): Not listed

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT)

CERCLA REGULATORY (40 CFR 302.4): Not applicable

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA STATUS (40 CFR 710): Listed

CANADA

WHMIS (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM):

Product Identification Number: Not applicable
Hazard Classification: Toxic, Class D, Div. 2, Subdiv. B
Ingredient Disclosure List: Listed

16. OTHER INFORMATION

REVISION SUMMARY

This MSDS replaces Revision #3, dated April 13, 2001. Changes in information are as follows:

Section 16 (Other Information): HMIS Headings

HMIS RATING

HEALTH:	2
FLAMMABILITY	0
PHYSICAL HAZARD:	0
PERSONAL PROTECTION (PPE):	J

NFPA RATING

HEALTH:	2
FLAMMABILITY	0
REACTIVITY:	0
SPECIAL:	None

Key

- 4 = Severe
- 3 = Serious
- 2 = Moderate
- 1 = Slight
- 0 = Minimal

HMIS RATINGS NOTES:

Protection = J (Safety goggles, gloves, apron & combination dust & vapor respirator)

The contents and format of this MSDS are in accordance with OSHA Hazard Communication Standard and Canada's Workplace Hazardous Information System (WHMIS).

National Fire Protection Association (NFPA)

Hazardous Materials Identification System (HMIS)

Material Safety Data Sheet



Sodium Metabisulfite

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Sodium Metabisulfite

OTHER/GENERIC NAMES: Anhydrous Sodium Bisulfite
Sodium Pyrosulfite
ABS

PRODUCT USE: Drug manufacture, food additive, water treatment, textile manufacture, photographic chemicals, and other chemical processes.

MANUFACTURER: Esseco General Chemical
90 East Halsey Road
Parsippany, NJ 07054
USA

FOR MORE INFORMATION CALL: 973-515-1840
(Monday-Friday, 9:00am-4:30pm)

IN CASE OF EMERGENCY CALL: 800-631-8050 or
(24 Hours/Day, 7 Days/Week) 973-515-0900
(Outside of USA)

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT NAME</u>	<u>CAS NUMBER</u>	<u>WEIGHT %</u>
Sodium metabisulfite	7681-57-4	>98
Sodium sulfite	7757-83-7	<1.5

Trace impurities and additional material names not listed above may appear in Section 15 of this MSDS. These materials may be listed for local "Right-To-Know" compliance and for other reasons.

OSHA Hazard Communication Standard: *This product is considered hazardous under the OSHA Hazard Communication Standard.*

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Fine, white granular product with a pungent sulfur dioxide gas odor. May irritate the skin. May cause irritation and/or burns to the eyes. Harmful if swallowed or inhaled. May cause severe and possibly fatal allergic reactions if inhaled or swallowed by some asthmatics and other 'sulfite-sensitive' individuals. Reacts with acids to form toxic and irritating sulfur dioxide gas. Releases sulfur dioxide if heated above 300°F.

POTENTIAL HEALTH HAZARDS

SKIN: Repeated or prolonged contact with dust may cause irritation. Contact with solutions will cause skin irritation.

EYES: Dust or mist may irritate or burn the eyes. Solutions will irritate or burn.



MATERIAL SAFETY DATA SHEET

Sodium Metabisulfite

INHALATION: Contact with acids, water and/or ice, releases sulfur dioxide gas which may be harmful or deadly if inhaled. May cause severe or deadly allergic reactions in some asthmatics and sulfite sensitive individuals. Inhalation of dust or mist can irritate the respiratory tract. Possible signs and symptoms of allergic reactions include bronchoconstriction, sweating, flushing, hives, rapid heart rate, decreased blood pressure and anaphylaxis.

INGESTION: May irritate the gastrointestinal tract. May cause severe or deadly allergic reactions in some asthmatics and sulfite sensitive individuals. Very large doses may cause violent colic, diarrhea, depression, and even death.

DELAYED EFFECTS: None known.

Ingredients found on one of the three OSHA designated carcinogen lists are listed below.

<u>INGREDIENT NAME</u>	<u>NTP STATUS</u>	<u>IARC STATUS</u>	<u>OSHA LIST</u>
No ingredients listed in this section.			

4. FIRST AID MEASURES

SKIN: Immediately wash skin with plenty of soap and water. Remove contaminated clothing and wash before reuse. Get medical attention if irritation persists.

EYES: Flush eyes immediately with water for at least 15 minutes. Get medical attention.

INHALATION: Promptly remove to fresh air. Get immediate medical attention if signs of suffocation, irritation or other symptoms develop.

INGESTION: If conscious, immediately give a large quantity of water or milk and induce vomiting by touching finger to back of throat. Get immediate medical attention. Never give anything by mouth to an unconscious person.

ADVICE TO PHYSICIAN: Treat symptomatically. Note potential for anaphylactic shock with allergic individuals.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

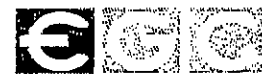
FLASH POINT:	Not flammable
FLASH POINT METHOD:	Not applicable
AUTOIGNITION TEMPERATURE:	Not applicable
UPPER FLAME LIMIT (volume % in air):	Not applicable
LOWER FLAME LIMIT (volume % in air):	Not applicable
FLAME PROPAGATION RATE (solids):	Not applicable
OSHA FLAMMABILITY CLASS:	Not applicable

EXTINGUISHING MEDIA:

Material is not flammable. Use extinguishing media appropriate for material in surrounding fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Releases toxic and irritating sulfur dioxide at fire temperatures.



MATERIAL SAFETY DATA SHEET

Sodium Metabisulfite

SPECIAL FIRE FIGHTING PRECAUTIONS/INSTRUCTIONS:

Wear NIOSH-approved self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL OR OTHER RELEASE: (See section 8 for recommended personal protective equipment.)

Promptly sweep up material with minimum dusting and shovel into an empty container with a cover. Cautiously spray residue with plenty of water. Provide ventilation to clear sulfur dioxide fumes which may be generated by contact with water.

Spills and releases may have to be reported to Federal and/or local authorities. See Section 15 regarding reporting requirements.

7. HANDLING AND STORAGE

NORMAL HANDLING: (See section 8 for recommended personal protective equipment.)

Avoid contact with skin, eyes and clothing. Do not breathe dust. Do not eat or drink in the work area. Use normal personal hygiene and housekeeping. Keep away from water, ice, acids, heat and oxidizing agents. For Food Grade product, see precautions in section 16 regarding on-board use in preserving shrimp and fish.

STORAGE RECOMMENDATIONS:

Store in a cool, dry, well-ventilated area away from water, ice, acids and oxidizing agents. Releases sulfur dioxide gas slowly at ambient temperatures

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

Local exhaust if dusty conditions exist or if there is a release of sulfur dioxide gas. Do not use in unventilated spaces, e.g., the holds of fishing boats, walk-in coolers or confined spaces.

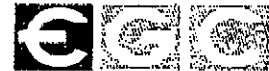
PERSONAL PROTECTIVE EQUIPMENT

SKIN PROTECTION: For handling dry material, wear cotton gloves and full work clothing, including long-sleeved shirt and trousers. When handling solutions and there is prolonged or repeated contact, wear impervious gloves, clothing and boots.

EYE PROTECTION: Wear a hard hat (or other head covering) and chemical safety goggles. Do not wear contact lenses.

RESPIRATORY PROTECTION: Where required, use a NIOSH-approved respirator for dust, mist and/or sulfur dioxide gas, as conditions indicate. Some exposures may require a NIOSH-approved self-contained breathing apparatus or supplied-air respirator.

ADDITIONAL RECOMMENDATIONS: Eyewash and safety shower is recommended.



MATERIAL SAFETY DATA SHEET

Sodium Metabisulfite

EXPOSURE GUIDELINES

<u>INGREDIENT NAME</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER LIMIT</u>
Sodium metabisulfite	5 mg/m ³ TWA	-----	-----

- ¹ = Limit established by General Chemical Corporation
² = Workplace Environmental Exposure Level (AIHA)
³ = Biological Exposure Index (ACGIH).

OTHER EXPOSURE LIMITS FOR POTENTIAL DECOMPOSITION PRODUCTS:

Sulfur dioxide: OSHA TWA = 5 ppm
 ACGIH TLV = 2 ppm
 ACGIH STEL = 5 ppm

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Fine, white granular material.	
PHYSICAL STATE:	Solid.	
MOLECULAR WEIGHT:	190.11	
CHEMICAL FORMULA:	Na ₂ S ₂ O ₅	
ODOR:	Pungent sulfur dioxide odor.	
SPECIFIC GRAVITY (water = 1.0):	1.48	
SOLUBILITY IN WATER (weight %):	39% at 16C	
pH:	1% solution - 4.3	
BOILING POINT:	Not applicable.	
MELTING POINT:	Begins to rapidly decompose above 150C	
VAPOR PRESSURE:	Not applicable.	
VAPOR DENSITY (air = 1.0):	Not applicable.	
EVAPORATION RATE:	Not applicable.	COMPARED TO: Not applicable
% VOLATILES:	Not applicable.	
FLASH POINT:	Not flammable.	

(Flash point method and additional flammability data are found in Section 5.)

10. STABILITY AND REACTIVITY

NORMALLY STABLE? (CONDITIONS TO AVOID):

Normally stable. Avoid elevated temperatures. Temperatures above 150C cause the rapid evolution of toxic and corrosive sulfur dioxide gas.

INCOMPATIBILITIES:

Oxidizers: may cause strong exothermic reactions.

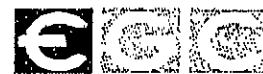
Acids, water and ice: releases sulfur dioxide gas which is toxic, corrosive, and potentially deadly. Water and/or ice speeds the production of sulfur dioxide gas.

HAZARDOUS DECOMPOSITION PRODUCTS:

Sulfur dioxide and sodium sulfide residue. Sodium sulfide is flammable, a dangerous fire risk, a strong irritant to skin and tissue, and is incompatible with acids.

HAZARDOUS POLYMERIZATION:

Will not occur.



MATERIAL SAFETY DATA SHEET

Sodium Metabisulfite

11. TOXICOLOGICAL INFORMATION

IMMEDIATE (ACUTE) EFFECTS:

Sodium metabisulfite – LD₅₀ (oral, rat) = 424 mg/kg

Sodium bisulfite – LD₅₀ (oral, mouse) = 820 mg/kg

DELAYED (SUBCHRONIC AND CHRONIC) EFFECTS:

Sodium sulfite has been demonstrated to be mutagenic in microbial systems; however, it is not mutagenic in studies involving insects and is not considered to present a mutagenic threat to multi-cell organisms.

OTHER DATA:

None

12. ECOLOGICAL INFORMATION

For Sodium sulfite:

2600 ppm/24, 48 & 96 hr/mosquito fish/TL_m/fresh water

Biological Oxygen Demand (BOD): 0.12 lb/lb, instantaneous

13. DISPOSAL CONSIDERATIONS

RCRA

Is the unused product a RCRA hazardous waste if discarded? No

If yes, the RCRA ID number is: Not applicable.

OTHER DISPOSAL CONSIDERATIONS:

Dispose of in accordance with applicable Federal, State and Local regulations.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

14. TRANSPORT INFORMATION

US DOT HAZARD CLASS: Not regulated.

US DOT ID NUMBER: Not applicable.

PROPER SHIPPING NAME: Not applicable.

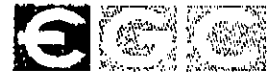
For additional information on shipping regulations affecting this material, contact the information number found in Section 1.

15. REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT (TSCA)

TSCA INVENTORY STATUS: All components are listed on TSCA Inventory of Chemical Substances.

OTHER TSCA ISSUES: None.



MATERIAL SAFETY DATA SHEET

Sodium Metabisulfite

SARA TITLE III/CERCLA

"Reportable Quantities" (RQs) and/or "Threshold Planning Quantities" (TPQs) exist for the following ingredients.

INGREDIENT NAME

SARA/CERCLA RQ (lb)

SARA EHS TPQ (lb)

No ingredients listed in this section.

Spills or releases resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center [(800) 424-8802] and to your Local Emergency Planning Committee.

SECTION 311 HAZARD CLASS: Immediate.

SARA 313 TOXIC CHEMICALS:

The following ingredients are SARA 313 "Toxic Chemicals" and may be subject to annual reporting requirements. CAS numbers and weight percents are found in Section 2.

INGREDIENT NAME

COMMENT

No ingredients listed in this section

STATE RIGHT-TO-KNOW

In addition to the ingredients found in Section 2, the following are listed for state right-to-know purposes.

INGREDIENT NAME

WEIGHT %

COMMENT

No ingredients listed in this section.

ADDITIONAL REGULATORY INFORMATION:

None

WHMIS CLASSIFICATION (CANADA):

D2B

FOREIGN CHEMICAL CONTROL INVENTORY STATUS:

Listed on Canadian DSL and EU EINECS.

16. OTHER INFORMATION

CURRENT ISSUE DATE: April, 2003

PREVIOUS ISSUE DATE: January, 2002

CHANGES TO MSDS FROM PREVIOUS ISSUE DATE ARE DUE TO THE FOLLOWING:

Change in company name.



MATERIAL SAFETY DATA SHEET
Sodium Metabisulfite

OTHER INFORMATION: Only NF grade is for use in drug formulation. Only Food Grade material is for use as a food additive.

On-board ship use of Food Grade material to preserve shrimp and fish:

NEVER apply dry material to shrimp or fish. **ALWAYS** prepare and use a solution in a well-ventilated area.

NEVER use below deck or in any confined space such as a hold or cooler. Injury or death may occur.

ALWAYS use on deck with plenty of ventilation.
Follow mixing and use directions printed on bag



CERTIFICATE OF ANALYSIS

Esseco General Chemical

Phone: (302) 792-8753 [1]
Fax: (302) 792-8610

To: BRENNTAG MID-SOUTH, INC. 250 CENTRAL FLORIDA TRUCKWAY ORLANDO, FL		Product: Sodium Metabisulfite NF/Food and Photo Grade Code: 0981634 Lot: NPS32444	
Sample #: 0000001932 Certificate #: 0000004634 Analyzed: SEP-20-2003 Shipped: DEC-22-2003	Order # : 5413000314 PO #: R44937 Release#: Ship Id:	Source: X Sample Properly Taken X Sample Representative	

Parameter	Specification	Analysis
Appearance	White to slightly yellow crystals free from significant foreign contamination	Pass
Sodium Metabisulfite (Na ₂ S ₂ O ₅)	98.6 - 99.8 %	99.3
Sulfur Dioxide (as SO ₂)	66.4 - 67.2 %	66.9
Na Thiosulfate (as Na ₂ S ₂ O ₃)	0.04 % max	Pass
Chlorides (as Cl)	0.05 % max	Pass
Iron (as Fe)	5 ppm max	Pass
Heavy Metals (as Pb)	10 ppm max	Pass
Selenium (as Se)	5 ppm max	Pass
pH 5% Solution @ 20C	4.0 - 4.6	4.2
Insoluble Matter (as Ca, Mg, NH ₄ OH ppt)	0.05 % max	Pass
Reaction to Ammoniacal Silver Nitrate	To Pass Test	Pass
Sodium Sulfite (Na ₂ SO ₃)	0.6 % max	0.2
Lead (as Pb)	0.5 ppm max	Pass

Received
 12-22-03
 014001

Certified By: *Luis De Jesus*
 Authorized Signature

Date: 19-DEC-2003



B R E N N A G M I D S O U T H G E N E R A L C H E M I C A L

CODE: 098-1632
 PRODUCT: SODIUM METABISULFITE
 NF AND FOOD GRADE
 EFFECTIVE: 6/3/03

Product Specifications

PARAMETER SPECIFICATIONS

Sodium Metabisulfite	(Na ₂ S ₂ O ₅)	98.6-99.8	%	
Sulfur Dioxide	(SO ₂)	66.4-67.2	%	
Iron	(Fe)	5	ppm	Max
Sodium Sulfite	(asNa ₂ SO ₃)	0.6	%	Max
Sodium Thiosulfate	(asNa ₂ S ₂ O ₃)	0.05	%	Max
Heavy Metals	(asPb)	10	ppm	Max
Lead	(asPb)	0.5	ppm	Max
Selenium	(asSe)	5	ppm	Max
Chloride	(Cl)	0.05	%	Max
Identification		TPT		

Screen Size (U.S. Sieve % by Weight):

Through 20 Mesh	100	%	Min
On 40 Mesh	12.5	%	Max
Through 100 Mesh	35	%	Max

Analytical Methods: NF, FCC and GCC

Special Requirements: Mercury or mercury salts in the Sodium Metabisulfite Plant are prohibited (includes process thermometers, lights and test equipment).

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED EXCEPT WHERE SHOWN OTHERWISE. IT IS BEING RELEASED TO THE PUBLIC IN INTEREST OF PROMOTING TECHNICAL, SCIENTIFIC, ENGINEERING OR SAFETY INFORMATION FOR THE SEA, AND, THEREFORE, ANY SUCH INFORMATION PROVIDED HEREIN IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM. ALL INFORMATION PROVIDED HEREIN IS RELEASED FOR USE BY PERSONS HAVING SPECIAL KNOWLEDGE, SKILL AND EXPERTISE IN THE APPLICABLE INDUSTRY. BRENNANT MIDSOUTH GENERAL CHEMICAL SHALL NOT BE RESPONSIBLE OR LIABLE FOR THE USE, APPLICATION OR IMPLEMENTATION OF THE INFORMATION PROVIDED HEREIN, AND ALL SUCH INFORMATION IS TO BE USED AT THE RISK AND IN THE GOOD JUDGMENT AND DISCRETION OF EACH PERSON, THEIR EMPLOYEES, AGENTS AND SPECIALTIES.



B R E N N A G M I D S O U T H G E N E R A L C H E M I C A L

90 EAST HALSEY ROAD • FARRINGTON, NJ 07064
 (844) 555EGC1 OR (844) 377 3261 • FAX: (973) 515 3232
 E MAIL: INFO@555EGC.COM

Ser #:

MATERIAL SAFETY DATA SHEET

CAIROX® Potassium Permanganate

NFPA* HAZARD SIGNAL

Health Hazard (less than 1 hour exposure)	1 = Materials which under fire conditions would give off irritating combustion products. Materials which on the skin could cause irritation.
Flammability Hazard	0 = Materials that will not burn.
Reactivity Hazard	0 = Materials which in themselves are normally stable, even under fire exposure conditions, and which are not reactive with water.
Special Hazard	OX = Oxidizer

*National Fire Protection Association 704

FIRST RESPONDERS:

Wear protective gloves, boots, goggles, and respirator. In case of fire, wear positive pressure breathing apparatus. Approach incident with caution. Use Emergency Response Guide Book NAERG 96 (RSPA P5800.7). Guide No. 140

Section I Product Identification

MANUFACTURER'S NAME:	CARUS CHEMICAL COMPANY	TELEPHONE NUMBER FOR INFORMATION:	1 815 223-1500
MANUFACTURING FACILITY:	Carus Chemical Company 1500 Eighth Street LaSalle, IL 61301	EMERGENCY TELEPHONE NO.:	1 800 435-6856
		CHEMTREC TELEPHONE NO.:	1 800 424-9300
PRODUCT NAME:	CAIROX® Potassium Permanganate, KMnO ₄	TRADE NAME:	CAIROX® Potassium Permanganate
SYNONYMS:	Permanganic acid potassium salt Chameleon mineral Condy's crystals Permanganate of potash		

Section II Fire and Explosion Hazard Data

The material itself is noncombustible but will accelerate the burning of combustible material.

FLASHPOINT	None
FLAMMABLE OR EXPLOSIVE LIMITS	Lower: Nonflammable Upper: Nonflammable
EXTINGUISHING MEDIA	Use large quantities of water. Water will turn pink to purple if in contact with potassium permanganate. Dike to contain.
SPECIAL FIREFIGHTING PROCEDURES	Watch for rapid burning and be prepared to retreat to a safe distance. If yellow, white or brown fumes are present, wear positive pressure breathing apparatus and full protective clothing.
UNUSUAL FIRE AND EXPLOSION HAZARDS	Powerful oxidizing material. May decompose spontaneously if exposed to intense heat (150°C/302°F). May be explosive in contact with certain other chemicals. May react violently with finely divided and readily oxidizable substances. Increases flammability of combustible materials.



CARUS CHEMICAL COMPANY

Section III Health Hazard Data

POTASSIUM PERMANGANATE: Acute oral LD₅₀(rat) = 780 mg/kg Male (14 days) 525 mg/kg Female (14 days)
The fatal adult human dose by ingestion is estimated to be 10 grams or 0.35 ounces.
(Ref. Handbook of Poisoning: Prevention, Diagnosis & Treatment, Twelfth Edition)

ROUTES OF EXPOSURE

- Inhalation**
Acute inhalation toxicity data are not available; however, airborne potassium permanganate in the form of dust, mist, or spray may irritate and cause damage to the respiratory tract.
- Skin Contact**
Prolonged contact of solutions at room temperature may be irritating to the skin, leaving brown stains on the skin. Concentrated solutions at elevated temperature and crystals are damaging to the skin.
- Eye Contact**
Potassium permanganate is damaging to eye tissue on contact. It may cause severe burns that result in damage to the eye.
- Ingestion**
Potassium permanganate, if swallowed, may cause severe burns to mucous membranes of the mouth, throat, esophagus, and stomach.

Registry of Toxic Effects of Chemical Substances
RTECS #SD6475000

EFFECTS OF OVEREXPOSURE

- Acute Overexposure**
Irritating or damaging to body tissue on contact
- Chronic Overexposure**
Prolonged exposure, usually many years, to heavy concentrations of dust and fumes above the Permissible Exposure Limit (PEL), mainly in the form of manganese oxides, may lead to lung irritation and central nervous system disorder. The symptoms may simulate Parkinson's disease. No known cases of central nervous system disorders due to exposure to KMnO₄ have been reported.
- Carcinogenicity**
Potassium permanganate has not been classified as a carcinogen by OSHA, NTP, IARC.
- Medical Conditions Generally Aggravated by Exposure**
Potassium permanganate will cause further irritation of tissue or open wounds, burns and mucous membranes.

EMERGENCY AND FIRST AID PROCEDURES

- Eyes**
Immediately flush eyes with large amounts of water for at least 15 minutes holding eyelids apart to ensure flushing of the entire surface. Do not attempt to use a chemical antidote. Seek medical attention immediately. Note to physician: Decomposition products are alkaline.
- Skin**
Immediately wash contaminated areas with water. Remove contaminated clothing and footwear. Wash clothing and decontaminate footwear before use. Seek medical attention immediately if irritation is severe.
- Inhalation**
Remove person from contaminated area to fresh air. If breathing has stopped, resuscitate and administer oxygen if readily available. Seek medical attention immediately.
- Ingestion**
Never give anything by mouth to an unconscious or convulsing person. If conscious, give large quantities of water. Seek medical attention immediately.



CARUS-CHEMICAL COMPANY

Section IV Hazardous Ingredients

Material or component	CAS No.†	%	Hazard Data	
Potassium Permanganate	7722-84-7	97% min. KMnO ₄	PEL** C***	5 mg Mn per cubic meter of air (5 mg Mn per cubic meter of air is equivalent to 0.0046 ounces per 1000 cubic feet of air.)
			TLV-TWA****	0.2 mg Mn per cubic meter of air

† Chemical Abstract Service Registration Number

** OSHA Permissible Exposure Limit, manganese compounds (expressed as Mn) 29CFR1910.1000 Table Z1

*** Ceiling Exposure Limit or maximum exposure concentration not to be exceeded under any circumstances.

**** American Conference of Governmental Industrial Hygienists (ACGIH) 1995/1996, for manganese dust and compounds, expressed as Mn. TLV-TWA = The time weighted average concentration for a normal 8 hour workday and a 40 hour workweek, to which nearly all workers may be repeatedly exposed, day after day, without adverse effect.

Section V Physical Data

BOILING POINT, 760 mm Hg	Not applicable	SPECIFIC GRAVITY	2.7 g/cm ³ 20°C (68°F)
VAPOR PRESSURE (mm Hg)	Not applicable	VAPOR DENSITY (AIR = 1)	Not applicable
SOLUBILITY IN WATER % BY SOLUTION	6.0% at 20°C (68°F); and 20% at 65°C (149°F)		
PERCENT VOLATILE BY VOLUME	Not Volatile		
EVAPORATION RATE (BUTYL ACETATE = 1)	Not applicable		
MELTING POINT	Starts to decompose with evolution of oxygen (O ₂) at temperatures above 150°C (302°F)		
APPEARANCE AND ODOR	Dark purple solid with a metallic luster, odorless		

Section VI Reactivity Data

STABILITY Under normal conditions, the material is stable.

CONDITIONS TO AVOID Contact with incompatible materials or heat (>150°C/302°F)

INCOMPATIBLE MATERIALS Acids, peroxides, formaldehyde, antifreeze, hydraulic fluids, and all combustible organic or readily oxidizable inorganic materials including metal powders. With hydrochloric acid, toxic chlorine gas is liberated.

HAZARDOUS DECOMPOSITION PRODUCTS When involved in a fire, potassium permanganate may form corrosive fumes.

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION Material is not known to polymerize.

Section VII Spill or Leak Procedures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

Clean up spills immediately by sweeping or shoveling up the material; do not return spilled material to the original container. Transfer to a clean metal drum. EPA banned the land disposal of D001 ignitable waste oxidizers. These wastes have to be deactivated by reduction (see below). To clean floors, flush with abundant quantities of water into sewer, if permitted by Federal, State, and Local regulations. If not permitted, collect water and treat chemically. (See below)

DEACTIVATION OF D001 IGNITABLE WASTE OXIDIZERS BY CHEMICAL REDUCTION

Reduce potassium permanganate in aqueous solutions with sodium thiosulfate (Hypo), a bisulfite or ferrous salt solution. The bisulfite or ferrous salt may require some dilute sulfuric acid to promote rapid reduction. If acid was used, neutralize with sodium bicarbonate to neutral pH. Decant or filter, and mix the sludge with sodium carbonate and deposit in an approved landfill. Where permitted, the sludge can be drained into sewer with large quantities of water. Use caution when reacting chemicals. Contact Carus Chemical for additional recommendations.



CARUS CHEMICAL COMPANY

Section VIII Protective Equipment to Be Used

VENTILATION REQUIREMENTS

Provide sufficient mechanical and/or local exhaust to maintain exposure below the Permissible Exposure Limit. (PEL)

RESPIRATORY PROTECTION

In the case where overexposure may exist, the use of an approved NIOSH-MSHA dust and mist respirator or an air supplied respirator is advised. Engineering or administrative controls should be implemented to control dust.

EYE

Face shield, goggles, or safety glasses with side shields should be worn.

GLOVES

Rubber or plastic gloves should be worn.

OTHER PROTECTIVE EQUIPMENT

Normal work clothing covering arms and legs, and rubber, or plastic apron should be worn.

WORK/HYGIENIC PRACTICES

Wash hands thoroughly with soap and water, after handling potassium permanganate and before eating or smoking.

Section IX Special Precautions and Other Comments

Protect containers from physical damage. Store in a cool, dry area in closed containers. Segregate from acids, peroxides, formaldehyde, and all combustible, organic or easily oxidizable materials including anti-freeze and hydraulic fluids.

DEPARTMENT OF TRANSPORTATION INFORMATION:

Proper Shipping Name: 49CFR172.101 Potassium Permanganate
 ID Number: 49CFR172.101 UN 1490
 Hazard Class: 49CFR172.101 Oxidizer
 Hazardous Substance
 Reportable Quantity: 40CFR116.4; 40CFR302.4 RQ-100 lb.

RCRA: Oxidizers such as potassium permanganate meet the criteria of ignitable waste. 40 CFR 261.21

SARA Title III Information

CAIROX® Potassium Permanganate contains 33-35% manganese as part of the chemical infrastructure (manganese compounds CAS Reg. No. N/A) and is subject to the reporting requirements of Section 313 of Title III, Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372.

Name: Kenneth Krogulski

Signature: *Kenneth Krogulski*

Revision Date: April 1997



CARUS

Carus Chemical Company
 315 Fifth Street
 P.O. Box 599
 Peru, IL 61354
 Tel (815) 223-1500
 Fax (815) 224-6897

The information contained is accurate to the best of our knowledge. However, data, safety standards and government regulations are subject to change, and the conditions of handling, use or misuse of the product are beyond our control. Carus Chemical Company makes no warranty, either express or implied including any warranties of merchantability and fitness for a particular purpose. Carus also disclaims all liability for reliance on the completeness or confirming accuracy of any information included herein. Users should satisfy themselves that they are aware of all current data relevant to their particular uses.

Rev. 4/97

Form # CX 1028

CAIROX® is a registered trademark of Carus Chemical Company, a Division of Carus Corporation.

Responsible Care® is a service mark of the Chemical Manufacturers Association.

Received: 9/16/03 1:22PM; -> Brenntag Mid-South, Inc; Page 2
09/16/2003 13:21 FAX 270 826 1486 BRENNTAG MID-SOUTH INC - HENDERSON WISH 002/004
09/16/2003 TUE 11:36 FAX 815 224 8882 CARUS CHEMICAL 002/004

CARUS CHEMICAL COMPANY
1500 Eighth Street
LaSalle, IL 61301



CERTIFICATE OF ANALYSIS

R38130

Product: CAIROX[®] Potassium Permanganate

Grade: Free Flow

Date of Manufacture: 13-Sep-03

Lot Number: 7624

Container: 55 lbs

	<u>Analysis</u>	<u>Specifications</u>
% Assay:	97.9	≥ 97.0
% Water Tolerance:	0.75	≥ 0.70
% Retained on 40 US Mesh:	0.1	≤ 20.0
% Retained on 140 US Mesh:	94.7	
% Retained on 200 US Mesh:	3.8	
% Through 200 US Mesh:	1.4	≤ 7.0
Appearance:	Normal	

received
10-01-03
012211

By:

Keith Kujawa

Keith Kujawa
Quality Assurance Manager
815-224-8871

APPROVED

9/16/03

CAIROX[®]**Potassium Permanganate**CAS[®] Registry No. 7722-64-7**Free-Flowing
Grade****DATA SHEET**

Free-Flowing Grade is recommended where the potassium permanganate is subjected to high humidity and where the material is to be dry fed, through a chemical feeder or stored in a bin or hopper. This is recommended for use in water or wastewater treatment plants. This is the only grade available in bulk.

FREE-FLOWING GRADE**Assay**Guaranteed 97% KMnO₄, Typical 98%**Particle Size**20% maximum retained on #425 U.S. Standard Sieve
(formerly #40)7% maximum through #75 U.S. Standard Sieve
(formerly #200)**Standards and Specifications**

CAIROX potassium permanganate is certified by the National Sanitation Foundation (NSF) to meet Standard 60: Drinking Water Treatment Chemicals—Health Effects.

Free-Flowing Grade meets:

AWWA Standard B603-88

West German DIN-19619

Water Chemical Codex RMIC values

Lithographed Full Open Top Metal, with Lever Lock Closure, Single-Trip Drums meet DOT-37A or 37B**25kg pail (55.125 lb) net**, with handle, made of 24-gauge steel, weighs 3.8 lb. It is tapered to allow nested storage of empty drums, stands approximately 13½ inches high and has a maximum diameter of 12 inches.**50kg drum (110.250 lb) net**, made of 24-gauge steel, weighs 8.25 lb. It is tapered to allow nested storage of empty drums, stands approximately 17¼ inches high and has a maximum diameter of 14¼ inches.**150kg drum (330.750 lb) net**, made of 22-gauge steel, weighs 22.4 lb. It stands approximately 29½ inches high and is approximately 19¾ inches in diameter.**Bulk**, 45,000# min (smaller quantities considered on request)**Special Packages** will be considered on request**CHEMICAL AND PHYSICAL DATA**

Formula	KMnO ₄
Formula Weight	158.0
Form	Granular Crystalline
Specific Gravity	
Solid	2.703 g/cm ³
6% Solution	1.039 by weight, 20°C/4°C
Bulk Density	Approximately 100 lb/ft ³

Solubility in Distilled Water

Temperature		Solubility	
°C	°F	g/L	wt oz/gal
0	32	27.8	3.7
20	68	65.0	8.6
40	104	125.2	16.7
60	140	230.0	30.7
70	158	286.4	38.3
75	167	323.5	43.2

Refer to the Solubility Fact Sheet, Form #130, for more information.

DESCRIPTION

Crystals or granules are dark purple with a metallic sheen, sometimes with a dark bronze-like appearance. Free-Flowing Grade is gray due to an additive. Potassium permanganate has a sweetish, astringent taste and is odorless.

HANDLING

Protect containers against physical damage. When handling potassium permanganate, respirators should be worn to avoid irritation of or damage to mucous membranes. Eye protection should also be worn when handling potassium permanganate as a solid or in solution. Refer to the Protective Equipment and First Aid Recommendations Fact Sheet, Form #171.

STORAGE

Potassium permanganate is stable and will keep indefinitely if stored in a cool, dry area in closed containers. Concrete floors are preferred to wooden decks.

To clean up spills and leaks follow the steps recommended in our MSDS Form #170. Be sure to use goggles, rubber gloves, and respirator when cleaning up a spill or leak.

INCOMPATIBILITY

Avoid contact with acids, peroxides, and all combustible organic or readily oxidizable materials including inorganic oxidizable materials and metal powders. With hydrochloric acid, chlorine gas is liberated.

Potassium permanganate is not combustible but will support combustion. It may decompose if exposed to intense heat. Fires may be controlled and extinguished by using large quantities of water. Refer to the MSDS, Form #170, for more information.

CORROSIVE PROPERTIES

Potassium permanganate is compatible with many metals and synthetic materials. Natural rubbers and fibers are often incompatible. Solution pH and temperature are also important factors. The material must be compatible with either the acid or alkali also being used.

In neutral and alkaline solutions, potassium permanganate is not corrosive to iron, mild steel or stainless steel. However, chloride corrosion of metals may be accelerated when an oxidant such as permanganate is present in solution. Plastics such as polypropylene, polyvinyl chloride Type I (PVC I), epoxy resins, fiberglass reinforced plastic (FRP), Penton, Lucite, Viton A, and Hypalon are suitable. Teflon FEP and TFE, and Tefzel ETFE are best. Refer to Material Compatibility Chart, Form #180.

Aluminum, zinc, copper, lead, and alloys containing these metals may be (slightly) affected by potassium permanganate solutions. Actual studies should be made under the conditions in which permanganate will be used.

SHIPPING

Potassium permanganate is classified by the Hazardous Materials Transportation Board (HMTB) as an oxidizer. It is shipped under Interstate Commerce Commission's (ICC) Tariff 19.

Proper Shipping Name: Potassium Permanganate
(RC-100/45.4)

Hazard Class: Oxidizer

Identification Number: UN 1490

Label Requirements: Oxidizer and Corrosive

Packaging Requirements: 49 CFR Parts 100 to 199
Sections: 173.152 173.153 173.154, 173.194

Shipping Limitations:

Minimum quantities:

Rail car: See Tariff for destination

Truck: No minimum

Postal regulations:

Information applicable to packaging of oxidizers for shipment by the U.S. Postal Service to domestic and foreign destinations is readily available from the local postmaster

United Parcel Service accepts 25 lb as largest unit quantity properly packaged; consult United Parcel Service.

Regulations concerning shipping and packing should be consulted regularly due to frequent changes.

REPACKING

When potassium permanganate is repacked, the packing, markings, labels, and shipping conditions must meet applicable Federal regulations. See Code of Federal Regulations - 49, Transportation, parts 100-199, and the Federal Hazardous Substances Act, 15 U.S.C 1261

APPLICATIONS

These are some of the many applications of potassium permanganate. Permanganate is a powerful oxidizing agent and the condition under which it is to be used should be completely investigated to minimize risks of violent reaction, fire, and explosion.

Oxidation and Synthesis

Organic chemicals and intermediates manufacture. Oxidizes impurities in organic and inorganic chemicals.

Water Treatment

Oxidizes iron, manganese, and hydrogen sulfide; controls taste and odor; and is an alternate pre-oxidant for THM control.

Municipal Wastewater Treatment

Destroys hydrogen sulfide in wastewater and sludge. Improves wastewater treatment.

Industrial Wastewater Treatment

Oxidizes hydrogen sulfide, phenols, iron, manganese, and many other organic and inorganic contaminants; resultant manganese dioxide aids in removing heavy metals.

Metal Surface Treatment

Conditions mill scale and smut to facilitate subsequent removal by acid pickling in wire manufacture and jet engine overhaul

Equipment Cleaning

Assists in cleaning organic and inorganic residues from refining and cooling towers and other processing equipment.

Purification of Gases

Removes trace impurities of sulfur, arsine, phosphine, silane, borane, and sulfides from carbon dioxide and other industrial gases.

Mining and Metallurgical

Aids in separation of molybdenum from copper; removes impurities from zinc and cadmium; oxidizes flotation compounds

Radioactive Decontamination

Used with other ingredients to decontaminate nuclear power plants, submarines and reactors; also to purify heavy water

Slag Quenching

Controls hydrogen sulfide and acetylene emissions during quenching of hot slag.

Other

Bleaches beeswax and some plasticizers. Increases swelling of sodium bentonite clays. Used in manufacture of printed circuit boards.

The information contained herein is accurate to the best of our knowledge. However, data, safety standards and government regulations are subject to change and the conditions of handling; use or misuse of the product are beyond our control. CARUS CHEMICAL COMPANY MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED INCLUDING ANY WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. CARUS ALSO DISCLAIMS ALL LIABILITY FOR RELIANCE ON THE COMPLETENESS OR CONFIRMING ACCURACY OF ANY INFORMATION INCLUDED HEREIN. Users should satisfy themselves that they are aware of all the current data relevant to their particular uses.



Division of Carus Corporation
P.O. Box 1500 • Ottawa, Illinois 61350
Telephone: (815) 433-9070 Cable: Carchemco
Telex: 797551
FAX: (815) 433-9075

ADDENDUM #1/FORMAL QUOTATION NO.: Q-040024
LEE COUNTY, FLORIDA
PROPOSAL QUOTE FORM
FOR THE ANNUAL PURCHASE OF
CHEMICALS FOR UTILITIES

ATTACHMENT 9

DATE SUBMITTED: December 15, 2003

VENDOR NAME: Fort Bend Services, Inc.

TO: The Board of County Commissioners
Lee County
Fort Myers, Florida

Having carefully examined the "General Conditions", and the "Detailed Specifications", all of which are contained herein, the Undersigned proposes to furnish the following which meet these specifications:

The undersigned acknowledges receipt of Addenda numbers:

Number 1

GRAND TOTAL (ALL SECTIONS): \$ 26,160.00

WILL YOU DELIVER WITH YOUR OWN VEHICLE AS OPPOSED TO COMMON CARRIER?

YES _____ NO X

SECTION 1, ANHYDROUS AMMONIA

Specify product name: No Bid

\$ _____ EA. X 60.6 tons = Total Cost \$ _____

SECTION 1A, ANHYDROUS AMMONIA

Specify product name: No Bid

\$ _____ EA. X 4 (150# cylinders) = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 2, ANIONIC POLYMERS

Specify product name: Superfloc A130HMW

\$ 1.04 EA. X 24,000 lbs = Total Cost \$ 24,960.00 (Note: Product sold in 55.1 lbs. bags)

Manufacturer Cytec **PolyFloc AP 1100P, or equal**

MINIMUM ORDER QUANTITY: 1 pallet except Waterway Estates @ 15 bags

SECTION 3, AQUA AMMONIA 18%

Specify product name: No Bid

\$ _____ EA. X 8,000 gallons = Total Cost \$ _____

Manufacturer _____

MINIMUM ORDER QUANTITY: _____

SECTION 4, BENTONITE CLAY ACCUFLOC SDG

Specify product name: No Bid

\$ _____ EA. X 500 lbs = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 5, CALCIUM HYPOCHLORITE 3 inch stabilized tablets

Specify product name: No Bid

\$ _____ EA. X 24 (100# pails) = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 6, CITRIC ACID

Specify product name: No Bid

\$ _____ EA. X 500 lbs = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 7, HYDRATED LIME

Specify product name: No Bid

\$ _____ EA. X 6,480 (50# bags) = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 8, HYDROCHLORIC ACID 31% (muriatic acid)

Specify product name: No Bid

\$ _____ EA. X 4,800 gallons (275 gal. totes) = Total Cost \$ _____

Manufacturer _____

SECTION 8A, HYDROCHLORIC ACID 31% (muriatic acid)

Specify product name: No Bid

\$ _____ EA. X 420 gallons (15 gal. carboys) = Total Cost \$ _____

Manufacturer _____

SECTION 8B, HYDROCHLORIC ACID 31% (muriatic acid)

Specify product name: No Bid

\$ _____ EA. X 244 gallons (1 gal. jugs) = Total Cost \$ _____

Manufacturer _____

MINIMUM ORDER QUANTITY: _____

SECTION 9, HYDROFLUOSILIC ACID 23%

Specify product name: No Bid

\$ _____ EA. X 13,000 gallons = Total Cost \$ _____

Specify product name : _____

MINIMUM ORDER QUANTITY: _____

SECTION 9A, HYDROFLUOSILIC ACID 23%

Specify product name: No Bid

\$ _____ EA. X 15 (275 gal. Totes) = Total Cost \$ _____

Specify product name : _____

SECTION 10, POLYMER (LIQUID)

Specify product name: PRP 2449

\$ 0.60 EA. X 2,000 lbs = Total Cost \$ 120.00

MINIMUM ORDER QUANTITY: 800 gallons

SECTION 11, POTASSIUM PERMANGANATE

Specify product name: No Bid

\$ _____ EA. X 2,000 lbs = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 12, PYRO-PHOSPHATE

Specify product name: No Bid

\$ _____ EA. X 18,000 lbs = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 13, SODA ASH

Specify product name: No Bid

\$ _____ EA. X 98 (50# bags) = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 13A, SODA ASH

Specify product name: No Bid

\$ _____ EA. X 200 tons = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 14, SODIUM HYPOCHLORITE SOLUTION

Specify product name: No Bid

\$ _____ EA. X 450,000 gallons = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 14A, SODIUM HYPOCHLORITE SOLUTION

Specify product name: No Bid

\$ _____ EA. X 20 (55 gal. drums) = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

SECTION 15, SODIUM METABISULFITE

Specify product name: No Bid

\$ _____ EA. X 500 (50# bags) = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

ADDENDUM #1/FORMAL QUOTATION NO.: Q-040024
SECTION 16, ZINC ORTHO- PHOSPHATE

Specify product name: No Bid

\$ _____ EA. X 49,000 lbs = Total Cost \$ _____

MINIMUM ORDER QUANTITY: _____

TO BE STARTED WITHIN _____ CALENDAR DAYS AFTER RECEIPT
OF AWARD AND PURCHASE ORDER.

Is your firm interested in being considered for the Local Vendor Preference?

Yes _____ No _____

If yes, then read the paragraph entitled "Local Vendor Preference" included in these specifications. Also complete the Local Vendor Preference Questionnaire and return with your quotation.

Quoters should carefully read all the terms and conditions of the specifications. Any representation of deviation or modification to the quote may be grounds to reject the quote.

Are there any modifications to the quote or specifications:

Yes _____ No _____

Failure to clearly identify any modifications in the space below or on a separate page may be grounds for the quoter being declared nonresponsive or to have the award of the quote rescinded by the County.

MODIFICATIONS:

Quoter shall submit his/her quote on the County's Proposal Quote Form, including the firm name and authorized signature. Any blank spaces on the Proposal Quote Form, qualifying notes or exceptions, counter offers, lack of required submittals, or signatures, on County's Form may result in the Quoter/Quote being declared non-responsive by the County.

ANTI-COLLUSION STATEMENT

THE BELOW SIGNED QUOTER HAS NOT DIVULGED TO, DISCUSSED OR COMPARED HIS QUOTE WITH OTHER QUOTERS AND HAS NOT COLLUDED WITH ANY OTHER QUOTER OR PARTIES TO A QUOTE WHATSOEVER. NOTE: NO PREMIUMS, REBATES OR GRATUITIES TO ANY EMPLOYEE OR AGENT ARE PERMITTED EITHER WITH, PRIOR TO, OR AFTER ANY DELIVERY OF MATERIALS. ANY SUCH VIOLATION WILL RESULT IN THE CANCELLATION AND/OR RETURN OF MATERIAL (AS APPLICABLE) AND THE REMOVAL FROM THE MASTER BIDDERS LIST.

FIRM NAME Fort Bend Services, Inc.

BY (Printed): David James

BY (Signature): David James

TITLE: Sales Manager

FEDERAL ID # OR S.S.# 74-2144642

ADDRESS: 13303 Redfish Lane

Stafford, Texas 77477

PHONE NO.: (800) 933-3678

FAX NO.: 281-261-2295

CELLULAR PHONE/PAGER NO.: 713-252-3215

LEE COUNTY OCCUPATIONAL LICENSE NUMBER: N.A.

E-MAIL ADDRESS: djames@fortbendservices.com

REVISED: 7/28/00

ADDENDUM #1/FORMAL QUOTATION NO.: Q-040024
ATTACHMENT A
LOCAL VENDOR PREFERENCE QUESTIONNAIRE
(LEE COUNTY ORDINANCE NO. 00-10)

Instructions: Please complete either Part A or B whichever is applicable to your firm

PART A: VENDOR'S PRINCIPAL PLACE OF BUSINESS IS LOCATED WITHIN LEE COUNTY (Only complete Part A if your principal place of business is located within the boundaries of Lee County)

1. **What is the physical location of your principal place of business that is located within the boundaries of Lee County, Florida?**

2. **What is the size of this facility (i.e. sales area size, warehouse, storage yard, etc.)**

PART B: VENDOR'S PRINCIPAL PLACE OF BUSINESS IS NOT LOCATED WITHIN LEE COUNTY OR DOES NOT HAVE A PHYSICAL LOCATION WITHIN LEE COUNTY (Please complete this section.)

1. How many employees are available to service this contract? 4
2. Describe the types and amount of equipment you have available to service this contract.

Jar tester, turbidimeter, settleometer, pH meter

3. Describe the types and amount of material stock that you have available to service this contract.

PRP 2449 will be shipped direct from the manufacturer's location as will the Superfloc A-130HMW. We inventory

3 pallets of Superfloc A-130HMW at our warehouse in Stafford, Texas We do not inventory PRP 2449 in bulk at our facility.

ADDENDUM #1/FORMAL QUOTATION NO.: Q-040024

4. Have you provided goods or services to Lee County on a regular basis for the preceding, consecutive five years?

Yes _____

No X

If yes, please provide your contractual history with Lee County for the past five, consecutive years. Attach additional pages if necessary.

ADDENDUM #1/FORMAL QUOTATION NO.: Q-040024
LEE COUNTY PURCHASING - BIDDERS CHECK LIST

IMPORTANT: Please read carefully and return with your bid proposal.
Please check off each of the following items as the necessary action is completed:

- 1. The Quote has been signed.
- 2. The Quote prices offered have been reviewed.
- 3. The price extensions and totals have been checked.
- 4. The original (must be manually signed) and 2 copies of the quote have been submitted.
- 5. Three (3) identical sets of descriptive literature, brochures and/or data (if required) have been submitted under separate cover.
- 6. All modifications have been acknowledged in the space provided.
- 7. All addendums issued, if any, have been acknowledged in the space provided.
- 8. Erasures or other changes made to the quote document have been initialed by the person signing the quote.
- 9. Bid Bond and/or certified Check, (if required) have been submitted with the quote in amounts indicated.
- 10. Any Delivery information required is included.

- 11. The mailing envelope has been addressed to:

MAILING ADDRESS	PHYSICAL ADDRESS
Lee County Purchasing	Lee County Purchasing
P.O. Box 398	1825 HENDRY STREET, 3 RD FLOOR
or	Ft. Myers, FL 33901
Ft. Myers, FL 33902-0398	

- 12. The mailing envelope **MUST** be sealed and marked with:
 - Quote Number
 - Opening Date and/or Receiving Date

- 13. The quote will be mailed or delivered in time to be received no later than the specified opening date and time. (Otherwise quote cannot be considered or accepted.)

- 14. If submitting a "NO BID" please write quote number here _____ and check one of the following:
 - Do not offer this product Insufficient time to respond.
 - Unable to meet specifications (why)
 - Unable to meet bond or insurance requirement.
 - Other: _____

Company Name and Address:



Jeb Bush
Governor

John O. Agwunobi MD, MBA
Secretary

October 7, 2003

Ms. Kathy Mabry
Fort Bend Services, Inc.
13303 Redfish Lane
Stafford, Texas 77477

RE: Lee County Utilities Water Plants Chemicals
Certification of Approval

Dear Ms. Mabry:

We have received your request to verify that your chemical products can be applied to the water treatment processes for the Lee County Utilities plants here in Lee County. The proposed polymer products by Cytec Industries, Inc. Superfloc A-130HMW polyacrylamide and by SNF Inc. PRP 2449 polyamine are NSF approved for potable water use. It is also understood that the proposed dosages to be applied will not exceed the maximum certified quantities.

The Department will not object to the introduction of these chemicals to the treatment processes with the assumption that these products are equivalent substitutes for the previously used chemicals and that there are adequate equipment previously installed to control the dosages. These products can be applied to the water treatment processes as recommended by the manufacturer immediately unless otherwise noticed. All additives and chemicals used to treat water shall conform with ANSI/NSF Standard 60, and dosage rates shall conform with 40 CFR 141.111 requirements.

Thank you for working with the LCHD. If you have any questions regarding this matter, please do not hesitate to call me or send me e-mail at jerry_ma@doh.state.fl.us.

Sincerely,

Jerry W. Ma, P.E.
Environmental Engineering

cc: Tom Hill



LEE COUNTY HEALTH DEPARTMENT
Judith Hartner, M.D., M.P.H.
Director

REPLY TO: Environmental Engineering
60 Danley Drive, Unit #1
Ft. Myers, Florida 33907
(941) 939-4245

FORT BEND SERVICES, INC.

MAILING ADDRESS
P.O. Box 1688
Stafford, TX 77497
(800) 933-3678 Toll Free



13303 Redfish Lane
Stafford, TX 77477
Office (281) 261-5199
Fax (281) 261-2295

Waste & Water Treatment Specialists

JANUARY 9, 2004

CHEVONE PETERSON
PURCHASING DIVISION
LEE COUNTY BOARD OF COUNTY COMMISSIONERS
P.O. BOX 398
FORT MEYERS, FL 33902-0398

SUBJECT: REPORT OF NON-DEFAULT AND NON-TERMINATION

DEAR CHEVONE:

THIS IS TO INFORM THE LEE COUNTY BOARD OF COUNTY COMMISSIONERS THAT FORT BEND SERVICES, INC. HAS NEVER BEEN TERMINATED FROM ANY CONTRACTS THAT WE HAVE ENTERED NOR HAVE WE DEFAULTED ON ANY CONTRACTS OR AGREEMENTS EVER ENTERED INTO. IF YOU HAVE ANY FURTHER QUESTIONS PLEASE FEEL FREE TO CALL AT ANY TIME.

SINCERELY,

FORT BEND SERVICES, INC.

DAVID JAMES
SALES MANAGER

FORT BEND SERVICES, INC.

FAX (281) 261-2295

FACSIMILE TRANSMITTAL SHEET

TO: Chevone Peterson	FROM: David James
COMPANY: Lee County Board/Purchasing	DATE: 1/9/04
FAX NUMBER:	TOTAL NO. OF PAGES INCLUDING COVER: 3
PHONE NUMBER:	SENDER'S REFERENCE NUMBER:
RE:	YOUR REFERENCE NUMBER:

URGENT PLEASE REVIEW PLEASE COMMENT PLEASE REPLY

NOTES/COMMENTS:

Chevone,

Here is the information you requested. This is a copy of the letter previously sent to Fort Bend Services, Inc. by the Lee County Health Dept. approving the products that we bid. Please review and inform me if this is what you are needing.

Thanks,
David James

**13303 REDFISH LANE * STAFFORD, TEXAS 77477
P.O. BOX 1688 * STAFFORD, TEXAS 77497**

OFFICE PHONE (281) 261-5199 * TOLL FREE (800) 933-3678

FORT BEND SERVICES, INC.

FAX (281) 261-2295

FACSIMILE TRANSMITTAL SHEET

TO: CHEVONE PETERSON **FROM:** DAVID JAMES

COMPANY: LEE County **DATE:** 1/6/04

FAX NUMBER: **TOTAL NO. OF PAGES INCLUDING COVER:** 17

PHONE NUMBER: **SENDER'S REFERENCE NUMBER:**

RE: **YOUR REFERENCE NUMBER:**

URGENT PLEASE REVIEW PLEASE COMMENT PLEASE REPLY

NOTES/COMMENTS:

MSDS + NSF status
of products Quoted

13303 REDFISH LANE * STAFFORD, TEXAS 77477
P.O. BOX 1688 * STAFFORD, TEXAS 77497

OFFICE PHONE (281) 261-5199 * TOLL FREE (800) 933-3678

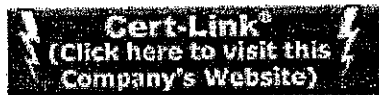
NSF Product and Service Listings

These Listings were Last Updated on **Tuesday, January 06, 2004** at 4:15 AM Eastern Time.
Please contact NSF International to confirm the status of any Listing, report errors, or make suggestions.

Warning: NSF is concerned about fraudulent downloading and manipulation of website text. If you have received this listing in hard copy, always confirm this certification/listing information by going directly to <http://www.nsf.org/Certified/PwsChemicals/Listings.asp?CompanyName=cytec&ChemicalName=Polyacrylamide> for the latest most accurate information.

NSF/ANSI STANDARD 60 Drinking Water Treatment Chemicals - Health Effects

CYTEC INDUSTRIES, INC.



5 GARRET MOUNTAIN PLAZA
WEST PATTERSON, NJ 07424
973-357-3100

Facility : # 2 USA

Polyacrylamide[PC] <i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Cyanamer A-15 Polyacrylamide	Coagulation & Flocculation Sequestering	1 mg/L
Cyanamer P-70 Antiscalant	Coagulation & Flocculation Sequestering	1 mg/L
Cyanamer P-71 Antiprecipitant	Coagulation & Flocculation Sequestering	1 mg/L
Cyquest 15 Antiprecipitant	Coagulation & Flocculation Sequestering	1 mg/L

[PC] Polyacrylamide Products Certified by NSF International comply with 40 CFR 141.111 requirements for percent monomer and dose.

Facility : # 3 USA

Polyacrylamide[PC] <i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Superfloc 1604 Flocculant	Coagulation & Flocculation	1mg/L
Superfloc 1606 Flocculant	Coagulation & Flocculation	1mg/L

NSF Certified Products - Public Water Supply Treatment Chemicals

Superfloc 4812 Flocculant	Coagulation & Flocculation	3.5mg/L
Superfloc 4814 Flocculant	Coagulation & Flocculation	3.5mg/L
Superfloc 4816 Flocculant	Coagulation & Flocculation	3.5mg/L
Superfloc 4818 Flocculant	Coagulation & Flocculation	3.5mg/L
Superfloc A-1883 LMW	Coagulation & Flocculation	3.5 mg/L
Superfloc A1849 RS	Coagulation & Flocculation	3.5 mg/L
Superfloc A1883 RS	Coagulation & Flocculation	3.5 mg/L
Superfloc AF 122 Flocculant	Coagulation & Flocculation	3.5mg/L
Superfloc AF 124 Flocculant	Coagulation & Flocculation	3.5mg/L
Superfloc AF 126 Flocculant	Coagulation & Flocculation	3.5mg/L
Superfloc AF 128 Flocculant	Coagulation & Flocculation	3.5mg/L
Superfloc C-1592 PG	Coagulation & Flocculation	3.1 mg/L
Superfloc C-1598 PG	Coagulation & Flocculation	2.5 mg/L
Superfloc FW101	Coagulation & Flocculation	3.5mg/L
Superfloc FW104	Coagulation & Flocculation	3.5mg/L
Superfloc FW131	Coagulation & Flocculation	3.5mg/L
Superfloc FW132	Coagulation & Flocculation	3.5mg/L
Superfloc FW133	Coagulation & Flocculation	3.5mg/L
Superfloc FW134	Coagulation & Flocculation	3.5mg/L
Superfloc FW201	Coagulation & Flocculation	2.5mg/L
Superfloc FW205	Coagulation & Flocculation	2.5mg/L
Superfloc N1986	Coagulation & Flocculation	3.5 mg/L
Superfloc VX-1604 Flocculant	Coagulation & Flocculation	1mg/L
Superfloc VX-1606 Flocculant	Coagulation & Flocculation	1mg/L

[PC] Polyacrylamide Products Certified by NSF International comply with 40 CFR 141.111 requirements for percent monomer and dose.

Facility : # 4 USA**Polyacrylamide[PC]**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Superfloc A-1883 LMW	Coagulation & Flocculation	3.5 mg/L
Superfloc A1849 RS	Coagulation & Flocculation	3.5 mg/L
Superfloc A1883 RSP	Coagulation & Flocculation	3.5 mg/L
Superfloc C-1592 PG	Coagulation & Flocculation	3.1 mg/L
Superfloc C-1598 PG	Coagulation & Flocculation	2.5 mg/L
Superfloc FW101	Coagulation & Flocculation	3.5mg/L
Superfloc FW104	Coagulation & Flocculation	3.5mg/L
Superfloc FW201	Coagulation & Flocculation	2.5mg/L
Superfloc FW205	Coagulation & Flocculation	2.5mg/L
Superfloc N1986	Coagulation & Flocculation	3.5 mg/L

[PC] Polyacrylamide Products Certified by NSF International comply with 40 CFR 141.111 requirements for percent monomer and dose.

Facility : # 11 USA

Polyacrylamide[PC]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Superfloc A-1883 LMW	Coagulation & Flocculation	3.5mg/L
Superfloc A1849 RS	Coagulation & Flocculation	3.5mg/L
Superfloc A1883 RS	Coagulation & Flocculation	3.5mg/L
Superfloc N1986	Coagulation & Flocculation	3.5mg/L

[PC] Polyacrylamide Products Certified by NSF International comply with 40 CFR 141.111 requirements for percent monomer and dose.

Facility : # 14 UNITED KINGDOM

Polyacrylamide[PC]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Superfloc A-100	Coagulation & Flocculation	1 mg/L
Superfloc A-110	Coagulation & Flocculation	1 mg/L
Superfloc A-120	Coagulation & Flocculation	1mg/L
Superfloc A-130	Coagulation & Flocculation	1 mg/L
<u>Superfloc A-130 HMW</u>	Coagulation & Flocculation	1 mg/L
Superfloc A-836	Coagulation & Flocculation	1 mg/L
Superfloc C-492 HMW PG	Coagulation & Flocculation	1mg/L
Superfloc C-492 PWG	Coagulation & Flocculation	1 mg/L
Superfloc C-496 PG	Coagulation & Flocculation	1 mg/L
Superfloc N-300	Coagulation & Flocculation	1 mg/L
Superfloc N-300 LMW	Coagulation & Flocculation	1 mg/L

[PC] Polyacrylamide Products Certified by NSF International comply with 40 CFR 141.111 requirements for percent monomer and dose.

Number of matching Manufacturers is 1
Number of matching Products is 55
Processing time was 0 seconds

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CYTEC**MATERIAL SAFETY DATA**

MSDS No: 06481

Date: 12/21/1999

Supersedes: 07/01/1997

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATIONPRODUCT NAME: **SUPERFLOC® A-130 HMW Flocculant**

SYNONYMS: None

CHEMICAL FAMILY: Anionic polyacrylamide

MOLECULAR FORMULA: Polymer

MOLECULAR WGT: Polymer

CYTEC INDUSTRIES INC., FIVE GARRET MOUNTAIN PLAZA, WEST PATERSON, NEW JERSEY 07424, USA

For Product Information call 1-800/652-6013. Outside the USA and Canada call 1-973/357-3193.

EMERGENCY PHONE: For emergency involving spill, leak, fire, exposure or accident call CHEMTREC: 1-800/424-9300. Outside the USA and Canada call 1-703/527-3887.

2. COMPOSITION/INFORMATION ON INGREDIENTS

OSHA REGULATED COMPONENTS

COMPONENT	CAS. NO.	%	TWA/CEILING	REFERENCE
No Permissible Exposure Limits (PEL/TLV) have been established by OSHA or ACGIH.				

3. HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW**

APPEARANCE AND ODOR: Off-white granular solid

STATEMENTS OF HAZARD:

IMPORTANT! SPILLS OF THIS PRODUCT ARE VERY SLIPPERY WHEN WET

POTENTIAL HEALTH EFFECTS

EFFECTS OF OVEREXPOSURE:

Acute oral (rat) and dermal (rabbit) LD50 values are estimated to be greater than 5.0 g/kg and 2.0 g/kg, respectively. The 4-hour LC50 (rat) value is estimated to be greater 20 mg/L.

Direct contact with this material may cause minimal eye and skin irritation.

4. FIRST AID MEASURES

Material is not expected to be harmful by ingestion. No specific first aid measures are required.

In case of skin contact, wash affected areas of skin with soap and water.

In case of eye contact, immediately irrigate with plenty of water for 15 minutes.

Material is not expected to be harmful if inhaled. If inhaled, remove to fresh air.

5. FIRE FIGHTING MEASURES**FLAMMABLE PROPERTIES**

FLASH POINT: Not applicable

SUPERFLOC® A-130 HMW Flocculant

MSDS No: 06481 Date: 12/21/1999

Page 2 of 5

FLAMMABLE LIMITS

(% BY VOL): Not applicable

AUTOIGNITION TEMP: <302 F; 150 C

DECOMPOSITION TEMP: <302 F; 150C

EXTINGUISHING MEDIA AND FIRE FIGHTING INSTRUCTIONS

Use water spray, carbon dioxide or dry chemical to extinguish fires. Use water to keep containers cool. Wear self-contained, positive pressure breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

Spilled material becomes very slippery when wet. Sweep up spills and place in a waste disposal container. Flush the area thoroughly with water and scrub to remove residue. If slipperiness remains, apply more dry-sweeping compound. Do not flush large quantities of the material to sewer.

7. HANDLING AND STORAGE

Spills should be scooped up or wiped up immediately, and the spill area flushed with water.

To avoid product degradation and equipment corrosion, do not use iron, copper or aluminum containers or equipment.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**ENGINEERING CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Engineering controls are not usually necessary if good hygiene practices are followed. Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water. Avoid unnecessary skin contact. Impervious gloves are recommended to prevent prolonged skin contact. For operations where eye or face contact can occur, eye protection is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Off-white granular solid

BOILING POINT: Not applicable

MELTING POINT: Not available

VAPOR PRESSURE: Not applicable

SPECIFIC GRAVITY: 0.75-0.95

VAPOR DENSITY: Not applicable

% VOLATILE (BY WT): 10-13; (water)

pH: Not applicable

SATURATION IN AIR (% BY VOL): Not available

EVAPORATION RATE: Not applicable

SOLUBILITY IN WATER: Limited by viscosity

VOLATILE ORGANIC CONTENT: Not available

10. STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: None known

POLYMERIZATION: Will Not Occur

SUPERFLOC® A-130 HMW Flocculant

MSDS No: 06481 Date: 12/21/1999

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CONDITIONS TO AVOID: None known

INCOMPATIBLE MATERIALS: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: carbon dioxide; carbon monoxide; ammonia; oxides of nitrogen

11. TOXICOLOGICAL INFORMATION

Toxicological information for the product is found under Section 3. HAZARDS IDENTIFICATION. Toxicological information on the OSHA regulated components of this product is as follows:

This product contains no OSHA regulated (hazardous) components.

California Proposition 65 Warning (applicable in California only) - This product contains (a) chemical(s) known to the State of California to cause cancer.

12. ECOLOGICAL INFORMATION

No aquatic LC50, BOD, or COD data available.

OCTANOL/H₂O PARTITION COEF.: Not applicable

13. DISPOSAL CONSIDERATIONS

The information on RCRA waste classification and disposal methodology provided below applies only to the Cytec product, as supplied. If the material has been altered or contaminated, or it has exceeded its recommended shelf life, the guidance may be inapplicable. Hazardous waste classification under federal regulations (40 CFR Part 261 et seq) is dependent upon whether a material is a RCRA "listed hazardous waste" or has any of the four RCRA "hazardous waste characteristics." Refer to 40 CFR Part 261.33 to determine if a given material to be disposed of is a RCRA "listed hazardous waste"; information contained in Section 15 of this MSDS is not intended to indicate if the product is a "listed hazardous waste." RCRA Hazardous Waste Characteristics: There are four characteristics defined in 40 CFR Section 261.21-61.24: Ignitability, Corrosivity, Reactivity, and Toxicity. To determine Ignitability, see Section 5 of this MSDS (flash point). For Corrosivity, see Sections 9 and 14 (pH and DOT corrosivity). For Reactivity, see Section 10 (incompatible materials). For Toxicity, see Section 2 (composition). Federal regulations are subject to change. State and local requirements, which may differ from or be more stringent than the federal regulations, may also apply to the classification of the material if it is to be disposed. Cytec encourages the recycle, recovery and reuse of materials, where permitted, as an alternate to disposal as a waste. Cytec recommends that organic materials classified as RCRA hazardous wastes be disposed of by thermal treatment or incineration at EPA approved facilities. Cytec has provided the foregoing for information only; the person generating the waste is responsible for determining the waste classification and disposal method.

14. TRANSPORT INFORMATION

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

SHIPPING NAME:	D.O.T. SHIPPING INFORMATION NOT APPLICABLE/NOT REGULATED	IMO SHIPPING INFORMATION NOT APPLICABLE/NOT REGULATED
HAZARD CLASS/ PACKING GROUP:	Not Applicable	Not Applicable
UN NUMBER:	Not Applicable	Not Applicable
IMDG PAGE:	Not Applicable	Not Applicable
D.O.T. HAZARDOUS SUBSTANCES:	(PRODUCT REPORTABLE QUANTITY) Not Applicable	Not Applicable

SUPERFLOC® A-130 HMW Flocculant

MSDS No: 06481 Date: 12/21/1999

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TRANSPORT LABEL REQUIRED:	None Required	None Required
SHIPPING NAME:	ICAO/IATA NOT APPLICABLE/NOT REGULATED	TRANSPORT CANADA NOT APPLICABLE/NOT REGULATED
HAZARD CLASS:	Not Applicable	Not Applicable
SUBSIDIARY CLASS:	Not Applicable	Not Applicable
UN / ID NUMBER:	Not Applicable	Not Applicable
PACKING GROUP:	Not Applicable	Not Applicable
TRANSPORT LABEL REQUIRED:	None Required	None Required
PACKING INSTR:	PASSENGER Not Applicable CARGO Not Applicable	Not Applicable
MAX NET QTY:	PASSENGER Not Applicable CARGO Not Applicable	Not Applicable

ADDITIONAL TRANSPORT INFORMATION

TECHNICAL NAME (N.O.S.): Not Applicable

15. REGULATORY INFORMATION

INVENTORY INFORMATION

- US TSCA: All components of this product are included on the TSCA Inventory in compliance with the Toxic Substances Control Act, 15 U. S. C. 2601 et. seq.
- CANADA DSL: Components of this product have been reported to Environment Canada in accordance with subsection 25 of the Canadian Environmental Protection Act and are included on the Domestic Substances List.
- EEC EINECS: All components of this product are included in the European Inventory of Existing Chemical Substances (EINECS) or are polymers of which the components are in EINECS, in compliance with Council Directive 67/548/EEC and its amendments.

OTHER ENVIRONMENTAL INFORMATION

The following components of this product may be subject to reporting requirements pursuant to Section 313 of CERCLA (40 CFR 372), Section 12(b) of TSCA, or may be subject to release reporting requirements (40 CFR 307, 40 CFR 311, etc.) See Section 13 for information on waste classification and waste disposal of this product.

COMPONENT	CAS. NO.	%	TPQ(lbs)	RQ(lbs)	S313	TSCA 12B
This product does not contain any components regulated under these sections of the EPA						

SUPERFLOC® A-130 HMW Flocculant

MSDS No: 06481 Date: 12/21/1999

Page 5 of 5

PRODUCT CLASSIFICATION UNDER SECTION 311 OF SARA
Not Applicable under SARA TITLE III

16. OTHER INFORMATION**NFPA HAZARD RATING (National Fire Protection Association)**

Fire	1	FIRE: Materials that must be preheated before ignition can occur.
Health	0	HEALTH: Materials which on exposure under fire conditions would offer no hazard beyond that of ordinary combustible material.
Reactivity	0	REACTIVITY: Materials which in themselves are normally stable, even under fire exposure conditions, and which are not reactive with water.
Special	—	

REASON FOR ISSUE:

Revised Section 4,5,9 & 10

Randy Deskin, Ph.D., DABT

This information is given without any warranty or representation. We do not assume any legal responsibility for same, nor do we give permission, inducement, or recommendation to practice any patented invention without a license. It is offered solely for your consideration, investigation and verification. Before using any product, read its label.

ONDEO NALCO COMPANY

ONDEO NALCO CENTER
NAPERVILLE, IL 60563-1198
630-305-1453

Facility : # 6 USA

Polyamines[PY]

Trade Designation

Coagulant Aid 250

Product Function

Coagulation & Flocculation

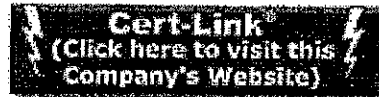
Max Use

20 mg/L

[PY] Polyamines Certified by NSF International comply with 40 CFR 141.111 requirements for percent monomer and dose.

PEAK POLYMER PERFORMANCE

17675 CHARTER PINES DRIVE
MONUMENT, CO 80132
719-488-1832



Facility : # 2 USA

Polyamines[PY]

Trade Designation

Peak Poly 2550 DW

Peak Poly 2550 HDW

Peak Poly 2550 LDW

Peak Poly 2550 MDW

Peak Poly 2550 ULDW

Product Function

Coagulation & Flocculation

Coagulation & Flocculation

Coagulation & Flocculation

Coagulation & Flocculation

Max Use

20mg/L

20mg/L

20mg/L

20mg/L

20mg/L

[PY] Polyamines Certified by NSF International comply with 40 CFR 141.111 requirements for percent monomer and dose.

PEARL RIVER POLYMERS, INC.

I-59 NORTH, EXIT 5A, SERVICE ROAD
P.O. BOX 1659

PEARL RIVER, LA 70452
 504-863-5703

Facility : PEARL RIVER, LA

Polyamines[PY]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Floerger® FL 12	Coagulation & Flocculation	16 mg/L
Floerger® FL 12 PWG	Coagulation & Flocculation	16 mg/L
Floerger® FL 15	Coagulation & Flocculation	12 mg/L
Floerger® FL 15 PWG	Coagulation & Flocculation	12 mg/L
Floerger® FL 16	Coagulation & Flocculation	20 mg/L
Floerger® FL 16 PWG	Coagulation & Flocculation	20 mg/L
Floerger® FL 17	Coagulation & Flocculation	20 mg/L
Floerger® FL 17 PWG	Coagulation & Flocculation	20 mg/L
Floerger® FL 18	Coagulation & Flocculation	20 mg/L
Floerger® FL 18 PWG	Coagulation & Flocculation	20 mg/L
Floerger® FL 28 P1	Coagulation & Flocculation	18 mg/L
Floerger® FL 28 P1 PWG	Coagulation & Flocculation	18 mg/L
Floerger® FL 28 P4	Coagulation & Flocculation	20 mg/L
Floerger® FL 28 P4 PWG	Coagulation & Flocculation	20 mg/L
Floquat 18-40	Coagulation & Flocculation	24 mg/L
PRP 2250	Coagulation & Flocculation	16 mg/L
PRP 2250 PWG	Coagulation & Flocculation	16 mg/L
PRP 2449 <u>FLOQUAT FL2449</u>	Coagulation & Flocculation	12 mg/L
PRP 2449 PWG	Coagulation & Flocculation	12 mg/L
PRP 2550	Coagulation & Flocculation	18 mg/L
PRP 2550 PWG	Coagulation & Flocculation	18 mg/L
PRP 2749	Coagulation & Flocculation	20 mg/L
PRP 2749 PWG	Coagulation & Flocculation	20 mg/L
PRP 2949	Coagulation & Flocculation	20 mg/L
PRP 2949 PWG	Coagulation & Flocculation	20 mg/L
PRP 3050	Coagulation & Flocculation	20 mg/L
PRP 3050 PWG	Coagulation & Flocculation	20 mg/L
PRP 3249	Coagulation & Flocculation	20 mg/L
PRP 3249 PWG	Coagulation & Flocculation	20 mg/L
Perchem 505	Coagulation & Flocculation	20 mg/L
Perchem 507	Coagulation & Flocculation	12 mg/L
Perchem 518	Coagulation & Flocculation	20 mg/L

[PY] Polyamines Certified by NSF International comply with 40 CFR 141.111 requirements for percent monomer and dose.

MATERIAL SAFETY DATA SHEET

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1. IDENTIFICATION OF THE PRODUCT AND THE COMPANY

FLOQUAT FL 2449

Supplier :**SNF INC**

PO Box 250

Riceboro, Georgia 31323

Tel : 912-884-3366 Fax : 912-884-5031

2. COMPOSITION/INFORMATION ON INGREDIENTS

Identification of the preparation : Cationic polymer in solution

Identification of the substance :

3. HAZARDS IDENTIFICATION

Spills produce extremely slippery surfaces.

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. FIRST AID MEASURES

Inhalation : Move to fresh air.

Skin contact : Wash with water and soap as a precaution. In case of persistent skin irritation, consult a physician.

Eye contact : Rinse thoroughly with plenty of water, also under the eyelids. In case of persistent eye irritation, consult a physician.

Ingestion : The product is not considered toxic based on studies on laboratory animals.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Water, water spray, foam, carbon dioxide (CO₂), dry powder

Fire extinguishing agents to avoid : None

Special fire-fighting precautions : Spills produce extremely slippery surfaces.

Protective equipment for firefighters : No special protective equipment required.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : No special precautions required.

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Environmental precautions : Do not contaminate water.

Methods for cleaning up : Do not flush with water. Dam up. Soak up with inert absorbent material. If liquid has been spilled in large quantities clean up promptly by scoop or vacuum. Keep in suitable and closed containers for disposal. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Handling : Avoid contact with skin and eyes. When preparing the working solution ensure there is adequate ventilation. When using do not smoke.

Storage : Keep in a dry, cool place (0 - 30°C). Keep away from heat and sources of ignition. Freezing will affect the physical condition and may damage the material.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls : Use local exhaust if misting occurs. Natural ventilation is adequate in absence of mists.

Personal protection equipment

- **Respiratory protection :** In case of insufficient ventilation wear suitable respiratory equipment.
- **Hand protection :** Rubber gloves.
- **Eye protection :** Safety glasses with side-shields. Do not wear contact lenses.
- **Skin protection :** Chemical resistant apron or protective suit if splashing or contact with solution is likely.

Hygiene measures : Wash hands before breaks and at the end of workday. Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form :	liquid
Color :	clear yellow liquid
pH :	5.0 - 9.0 <small>for product series. See Technical Bulletin for specific value.</small>
Flash point (°C) :	>100°C
Autoignition temperature (°C) :	>200°C
Vapour pressure (mm Hg) :	No data available
Bulk density :	See Technical Bulletin
Water solubility :	Completely miscible
Viscosity (mPa s) :	See Technical Bulletin

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10. STABILITY AND REACTIVITY

- Stability :** Product is stable, No hazardous polymerization will occur.
Oxidizing agents may cause exothermic reactions.
- Hazardous decomposition products :** No decomposition if stored and applied as directed. Burning of the dried material can produce : hydrogen chloride gas, nitrogen oxides (NOx) carbon oxides.

11. TOXICOLOGICAL INFORMATION**Acute toxicity**

- **Oral :** LD50/oral/rat > 2000 mg/kg (estimated)
- **Dermal :** LD50/dermal/rat > 2000 mg/kg (estimated)
- **Inhalation :** The product is not expected to be toxic by inhalation.

Irritation

- **Skin :** Testing conducted on rabbits according to the Draize technique showed the material to be mildly irritating to the skin.
- **Eyes :** Testing conducted according to the Draize technique showed the material produces no corneal or iridial effects and only slight conjunctival effects.

Sensitization : Not sensitizing.

Chronic toxicity : NOEL/oral/rat/90days = 2000 mg/kg

Other information : Not mutagenic in AMES Test. Not mutagenic in micronucleus test on mice.

12. ECOLOGICAL INFORMATION**Ecotoxicity:**

The effects of this product on aquatic organisms are rapidly and significantly mitigated by the presence of dissolved organic carbon in the aquatic environment.

- **Fish** LC50/Danio rerio/96 hr > 10 mg/l (OECD 203)
- **Algae :** Algal inhibition tests are not appropriate. The flocculating characteristics of the product interfere directly in the test medium preventing homogenous distribution which invalidates the test.
- **Daphnia :** EC50/Daphnia magna/48 hr > 10 mg/l (OECD 202)
- Bioaccumulation :** Does not bioaccumulate.

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Persistence / degradability : Not readily biodegradable.

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products : In accordance with federal, state and local regulations.

Contaminated packaging : Rinse empty containers with water and use the rinse water to prepare the working solution. Can be landfilled or incinerated, when in compliance with local regulations.

14. TRANSPORT INFORMATION

Not regulated by DOT.

15. REGULATORY INFORMATION

All components of this product are on the TSCA and DSL inventories.

RCRA status : Not a hazardous waste.

Hazardous waste number : Not applicable

Reportable quantity (40 CFR 302) : Not applicable

Threshold planning quantity (40 CFR 355) : Not applicable

California Proposition 65 information : Not applicable

HMIS & NFPA Ratings	HMIS	NFPA
Health :	1	1
Flammability :	0	0
Reactivity :	0	0

16. OTHER INFORMATION

Person to contact : Regulatory Affairs Manager

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release, and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process unless specified in the text.

FORT BEND SERVICES, INC.

MAILING ADDRESS
P.O. Box 1688
Stafford, TX 77497
(800) 933-3678 Toll Free



13303 Redfish Lane
Stafford, TX 77477
Office (281) 261-5199
Fax (281) 261-2295

Waste & Water Treatment Specialists

January 6, 2004

Chevone Peterson
Purchasing Division
Lee County Board of County Commissioners
P.O. Box 398
Fort Myers, Fl. 33902-0398

SUBJECT: Report of No Accidental Spills

Dear Chevone:

This is to notify you that Fort Bend Services, Inc. and its suppliers will warranty all products offered on formal Quote No.: Q-040024. This is to also notify you that Fort Bend Services, Inc. has not had any accidental spills at any of our delivery locations.

Sincerely,

Fort Bend Services, Inc.

A handwritten signature in black ink that reads 'David James'.

David James
Sales Manager

To: Chevone Peterson
From: Chad Denney
Date: February 13, 2004

Re: Proposals/Quote No. Q-040024
Chemicals for Utilities – Annual

Chevone, I will go section by section to give our recommendations.

Section 1, Anhydrous Ammonia.

We do not want to award this at this time. The current quote will be up in June and we will either go out for quote then or extend the current quote. We are in the process of purchasing two new ammonia tanks. The tanks we are replacing can only be filled by Laroche so we need to continue to get ammonia from them. Once we have the new tanks in place we can use anyone's ammonia.

Section 1A, Anhydrous Ammonia 150 lb cyls.

Dumont was the only bidder. Please award the bid to them.

We anticipate spending \$1,376.00 on Ammonia in the next year. The money will come out of the following account string;

College Parkway WP OD53626-5240

Section 2, Anionic Polymers

Fort Bend Services was the low bidder. Please award the bid to them. Remember the polymer is a conditional award since they have to meet the pre qualifications written in the bid specs.

We anticipate spending \$24,960.00 on Polymer in the next year. The Bartow plant is currently not running so we may not even use this product any time soon. We do not plan to use this plant unless we are very critical on water. The money will come out of the following account string;

Bartow WTP OD53608-5240

Section 3, Aqua Ammonia 18%

Dumont was the only bidder on this. Please award the bid to them.

We anticipate spending \$11,840 on Aqua Ammonia in the next year. The money will come out of the following account string;

Olga WP OD53601-5240

Section 4, Bentonite Clay

There were no bids received for this product. For the time being we do not want to rebid this. This is used at the Bartow plant, which is not in service. If we need this product we can do a one-time purchase, which will last for a few months. We currently have a few months supply on hand.

Section 5, Calcium Hypochlorite 3inch tablets

Dumont was the low bidder on this. Please award the quote to them.

We anticipate spending \$7,872 on Calcium Hypochlorite in the next year. The money will come out of the following account string;

Three Oaks WWTP OD53629-5240

Section 6, Citric Acid

Harcros was the low bidder on this. Please award the quote to them.

We anticipate spending \$345.00 on Citric Acid in the next year. The money will come out of the following account string;

Pinewoods WTP OD53619-5240

Section 7, Hydrated Lime - 50 lb bags

There were three bids on this. Chemical Lime was the low bidder but their minimum order quantity was 24 tons. We plan to order it in 1-ton lots. The next lowest bidder was Dumont. Please award the quote to Dumont.

We anticipate spending \$33,372.00 on Hydrated Lime in the next year. The money will come out of the following account strings;

Gateway Services WWTP	OD53628-5240
San Carlos WWTP	OD53620-5240
Three Oaks WWTP	OD53629-5240
Detar Warehouse	OD53616-5240

Section 8, Hydrochloric Acid 31% - 275 gallon totes

There were three quotes on this. Harcros was the low bidder. Please award the quote to Harcros.

We anticipate spending \$5,040.00 on Hydrochloric Acid in the next year. The money will come out of the following account strings;

North Reservoir	OD53601-5240
Olga WTP	OD53601-5240

Section 8A, Hydrochloric Acid 31% - 15-gallon carboys

There were three quotes on this. Harcross was the low bidder but their minimum order was too high. The next lowest bidder was Brenntag. Please award the quote to Brenntag.

We anticipate spending \$722.40 on Hydrochloric Acid in the next year. The money will come out of the following account strings;

Green Meadows WP	OD53627-5240
Waterway Estates WP	OD53625-5240
Olga WP	OD53601-5240
College Parkway WP	OD53626-5240

Section 8B, Hydrochloric Acid 31% - one gallon jugs

There were two quotes on this. Harcross was the low bidder but their minimum order was too high. The next lowest bidder was Dumont. Please award the quote to Dumont.

We anticipate spending \$671.00 on Hydrochloric Acid in the next year. The money will come out of the following account strings;

Corkscrew WTP	OD53618-5240
Fiesta Village WWTP	OD53624-5240

Section 9, Hydrofluosilic Acid - Bulk

There were two Quotes on this. Allied was the low bidder. Please award the quote to Allied.

We anticipate spending \$14,490.00 on Hydrofluosilic Acid in the next year. The money will come out of the following account strings;

Corkscrew WP	OD53618-5240
Olga WP	OD53601-5240

Section 9A, Hydrofluosilic Acid – 275 totes

There were three quotes on this. Dumont was the lowest bidder. Please award the quote to Dumont.

We anticipate spending \$1,595.00 on Hydrofluosilic Acid in the next year. The money will come out of the following account strings;

Bartow WP	OD53608-5240
Pinewoods WTP	OD53619-5240

Section 10, Polymer, Liquid

There were six quotes on this. Fort Bend Services was the low bidder. Please award the bid to them. Remember the polymer is a conditional award since they have to meet the pre qualifications written in the bid specs.

We anticipate spending \$1,200.00 on Polymer in the next year. The Bartow plant is currently not running so we may not even use this product any time soon. We do not plan to use this plant unless we are very critical on water. The money will come out of the following account string;

Bartow WTP OD53608-5240

Section 11, Potassium Permanganate

There were four quotes on this. Harcros was the lowest bidder. Please award the bid to Harcros.

We anticipate spending \$3,700.00 Potassium Permanganate on in the next year. The Bartow plant is currently not running so we may not even use this product any time soon. We do not plan to use this plant unless we are very critical on water. The money will come out of the following account strings;

Bartow WTP OD53608-5240

Section 12, Pyro-Phosphate

There were five quotes on this. Nalco was the lowest bidder. Please award the bid to Nalco.

We anticipate spending \$10,440.00 on Pyro-Phosphate in the next year. The money will come out of the following account string;

Pinewoods WP OD53619-5240

Section 13, Soda Ash – 50-pound bags

There were three bids on this. Brenntag was the lowest bidder. Please award the bid to Brenntag.

We anticipate spending \$907.00 on Soda Ash in the next year. The money will come out of the following account strings;

Pine Island WWTP	OD53651-5240
Ft Myers Beach WWTP	OD53605-5240

Section 13A, Soda Ash – Bulk

There was one bid on this. Please award the bid to Brenntag.

We anticipate spending \$40,000.00 on Soda Ash in the next year. Soda Ash will be used at Olga after the plant has been upgraded. We are not sure when this will happen so we may not purchase any bulk soda ash this year. The money will come out of the following account string;

Olga WP	OD53601-5240
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Section 14, Sodium Hypochlorite – Bulk

Since we have received a letter from Odyssey saying that they will service our new sites at the same price we do not wish to award this section.

Section 14A, Sodium Hypochlorite – 55-gallon drums

We do not want to award this section. We currently have a PO with Dumont for this product; our estimated usage for the year will be less than \$2,000.00. When we work on the large quote in June we can readdress this if needed.

Section 15, Sodium Metabisulfite

There were two bids on this. The lowest bidder was Harcros. Their minimum order amount was too much. The next lowest bidder was Brenntag. Please award the bid to Brenntag. There is a math error on both of these bids. We ask for a price per fifty-pound bags. We say the estimated annual usage is 500 lbs. They both did a bid on 500 fifty-pound bags. So their total is off.

We anticipate spending \$225.00 on Sodium Metisulfate in the next year. The money will come out of the following account string;

Pinewoods WP

OD53619-5240

Section 16, Zinc Ortho Phosphate

There were six bids on this. Carus was the lowest bidder, but their minimum order was too much. Calciquest was the next lowest but the Phosphate to Zinc ratio was reversed. Nalco was the next lowest bidder. Please award the bid to Nalco.

We anticipate spending \$25,480.00 on Zinc Ortho Phosphate in the next year. The money will come out of the following account string;

Pinewoods WP

OD53619-5240

Should you have any question please let me know.

**MEMORANDUM
FROM
UTILITIES DEPARTMENT**

DATE: February 25, 2004

TO: JANET SHEEHAN, CPPB
PURCHASING DIRECTOR

FROM: RICK DIAZ
UTILITIES DIRECTOR



RE: Project Q-040024 – Chemicals for Utilities

After further review of the above referenced project, my recommendation is as follows:

Section 14 – Sodium Hypochlorite @ \$.425 per gallon to Odyssey Manf. Company
Section 14A – Sodium Hypochlorite @ \$60.50 per 55 gal. drum to The Dumount Company

If there are any questions, please let me know.