

EXHIBIT

"A"

**CITY OF ROUND ROCK AGREEMENT
FOR PURCHASE OF WATER TREATMENT CHEMICALS
FROM
CHEMTRADE CHEMICALS, INC.**

THE STATE OF TEXAS

§

CITY OF ROUND ROCK

§

KNOW ALL BY THESE PRESENTS:

§

COUNTY OF WILLIAMSON

§

COUNTY OF TRAVIS

§

That this Agreement for purchase of aluminum chlorohydrate and liquid ammonium sulfate, and for related goods and services, referred to herein as the "Agreement," is made and entered into on this the ____ day of the month of _____, 2016, by and between the CITY OF ROUND ROCK, TEXAS, a home-rule municipality whose offices are located at 221 East Main Street, Round Rock, Texas 78664, referred to herein as the "City," and CHEMTRADE CHEMICALS, INC., whose offices are located at 155 Gordon Baker Road, Suite 300, Toronto, Ontario, Canada M2H3N5, referred to herein as the "Vendor." This Agreement supersedes and replaces any previous agreements between the named parties, whether oral or written, and whether or not established by custom and practice.

RECITALS:

WHEREAS, City desires to purchase aluminum chlorohydrate and liquid ammonium sulfate, and associated goods and services, and City desires to purchase same from Vendor; and

WHEREAS, City has issued its "Invitation for Bid" for the provision of said goods, and City has selected the bid submitted by Vendor; and

WHEREAS, the parties desire to enter into this Agreement to set forth in writing their respective rights, duties, and obligations;

NOW, THEREFORE, WITNESSETH:

That for and in consideration of the mutual promises contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties mutually agree as follows:

1.01 DEFINITIONS

A. **Agreement** means the binding legal contract between City and Vendor whereby City is obligated to buy specified goods and Vendor is obligated to sell same. The Agreement includes the following: (a) City's Invitation for Bid designated IFB 11-024; Specification Number 16-013 dated August 2016; and Addendum No. 1 dated August 29, 2016; (b) Vendor's Response to IFB; (c) contract award; and (d) any exhibits, addenda, and/or amendments thereto. Any inconsistencies or conflicts in the contract documents shall be resolved by giving preference

in the following order:

- (1) This Agreement;
- (2) Purchaser's Response to IFB;
- (3) City's Invitation for Bids, exhibits, and attachments.

B. **City** means the City of Round Rock, Williamson and Travis Counties, Texas.

C. **Effective Date** means the date upon which the binding signatures of both parties to this Agreement are affixed.

D. **Force Majeure** means acts of God, strikes, lockouts, or other industrial disturbances, acts of the public enemy, orders of any kind from the government of the United States or the State of Texas or any civil or military authority, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, hurricanes, storms, floods, restraint of the government and the people, civil disturbances, explosions, or other causes not reasonably within the control of the party claiming such inability.

E. **Goods** mean the specified supplies, materials, commodities, or equipment.

F. **Vendor** means Chemtrade Chemicals, Inc., or any of its successors or assigns.

2.01 EFFECTIVE DATE, INITIAL TERM, AND ALLOWABLE RENEWALS

A. This Agreement shall be effective on the date it has been signed by both parties hereto, and shall remain in full force and effect unless and until it expires by operation of the term stated herein, or until terminated or extended as provided herein.

B. The term of this Agreement shall be for sixty (60) months from the effective date hereof.

C. City reserves the right to review the relationship at any time, and may elect to terminate this Agreement with or without cause or may elect to continue.

3.01 CONTRACT DOCUMENTS AND EXHIBITS

City selected Vendor to supply certain goods as outlined in IFB 16-013, Specification Number 885-16, dated August 2016, and Addendum No. 1 dated August 29, 2016. The goods which are the subject matter of this Agreement are described in Exhibit "A" and, together with this Agreement, comprise the total Agreement and they are fully a part of this Agreement as if repeated herein in full.

4.01 ITEMS AWARDED

Only the following IFB line items on Exhibit "A" are awarded to the Vendor: item #5, aluminum chlorohydrate; and item #10 liquid ammonium sulfate.

5.01 COSTS

The City shall pay to Vendor the bid costs listed on pages twenty-four (24) and twenty-five (25) of Exhibit “A,” which are specifically relevant to the referenced bid items #5 and #10.

6.01 INVOICES

All invoices shall include, at a minimum, the following information:

- A. Name and address of Vendor;
- B. Purchase Order Number;
- C. Description and quantity of items received; and
- D. Delivery dates.

7.01 INTERLOCAL COOPERATIVE CONTRACTING / PURCHASING

Authority for local governments to contract with one another to perform certain governmental functions and services, including but not limited to purchasing functions, is granted under Government Code, Title 7, Chapter 791, Interlocal Cooperation Contracts, Subchapter B and Subchapter C, and Local Government Code, Title 8, Chapter 271, Subchapter F, Section 271.101 and Section 271.102.

Other governmental entities within the State of Texas may be extended the opportunity to purchase off of the City of Round Rock’s bid, with the consent and agreement of the successful vendor(s) and Round Rock. Such agreement shall be conclusively inferred for the vendor from lack of exception to this clause in the vendor’s response. However, all parties hereby expressly agree that the City of Round Rock is not an agent of, partner to, or representative of those outside agencies or entities and that the City of Round Rock is not obligated or liable for any action or debts that may arise out of such independently-negotiated “piggyback” procurements.

8.01 NON-APPROPRIATION AND FISCAL FUNDING

This Agreement is a commitment of City’s current revenues only. It is understood and agreed that City shall have the right to terminate this Agreement at the end of any City fiscal year if the governing body of City does not appropriate funds sufficient to purchase the services as determined by City’s budget for the fiscal year in question. City may effect such termination by giving Vendor a written notice of termination at the end of its then-current fiscal year.

9.01 PROMPT PAYMENT POLICY

In accordance with Chapter 2251, V.T.C.A., Texas Government Code, any payment to be made by City to Vendor will be made within thirty (30) days of the date City receives goods under this Agreement, the date the performance of the services under this Agreement are

completed, or the date City receives a correct invoice for the goods or services, whichever is later. Vendor may charge interest on an overdue payment at the “rate in effect” on September 1 of the fiscal year in which the payment becomes overdue, in accordance with V.T.C.A., Texas Government Code, Section 2251.025(b). This Prompt Payment Policy does not apply to payments made by City in the event:

- A. There is a bona fide dispute between City and Vendor, a contractor, subcontractor, or supplier about the goods delivered or the service performed that causes the payment to be late; or
- B. There is a bona fide dispute between Vendor and a subcontractor or between a subcontractor and its supplier about the goods delivered or the service performed that causes the payment to be late; or
- C. The terms of a federal contract, grant, regulation, or statute prevent City from making a timely payment with federal funds; or
- D. The invoice is not mailed to City in strict accordance with any instruction on the purchase order relating to the payment.

10.01 GRATUITIES AND BRIBES

City may, by written notice to Vendor, cancel this Agreement without incurring any liability to Vendor if it is determined by City that gratuities or bribes in the form of entertainment, gifts, or otherwise were offered or given by Vendor or its agents or representatives to any City officer, employee or elected representative with respect to the performance of this Agreement. In addition, Vendor may be subject to penalties stated in Title 8 of the Texas Penal Code.

11.01 TAXES

City is exempt from Federal Excise and State Sales Tax; therefore, tax shall not be included in Vendor’s charges.

12.01 ORDERS PLACED WITH ALTERNATE VENDORS

If Vendor cannot provide the goods as specified, City reserves the right and option to obtain the products from another supplier or suppliers.

13.01 INSURANCE

Vendor shall meet all requirements as stated in the attached Invitation for Bid No. IFB 16-2013 and as set forth at:

https://www.roundrocktexas.gov/wp-content/uploads/2014/12/corr_insurance_07.20112.pdf

14.01 CITY'S REPRESENTATIVE

City hereby designates the following representative(s) authorized to act in its behalf with regard to this Agreement:

Kim Lutz, Senior Utility Services Manager
2008 Enterprise Drive
Round Rock, Texas, 78664
Telephone: (512) 341-333

15.01 RIGHT TO ASSURANCE

Whenever either party to this Agreement, in good faith, has reason to question the other party's intent to perform hereunder, then demand may be made to the other party for written assurance of the intent to perform. In the event that no written assurance is given within the reasonable time specified when demand is made, then and in that event the demanding party may treat such failure as an anticipatory repudiation of this Agreement.

16.01 DEFAULT

If Vendor abandons or defaults hereunder and is a cause of City purchasing the specified goods elsewhere, Vendor agrees that it may be charged the difference in cost, if any, and that it will not be considered in the re-advertisement of the service and that it may not be considered in future bids for the same type of work unless the scope of work is significantly changed.

Vendor shall be declared in default of this Agreement if it does any of the following:

- A. Fails to make any payment in full when due;
- B. Fails to fully, timely and faithfully perform any of its material obligations hereunder;
- C. Fails to provide adequate assurance of performance under the "Right to Assurance" section herein; or
- D. Becomes insolvent or seeks relief under the bankruptcy laws of the United States.

17.01 TERMINATION AND SUSPENSION

A. City has the right to terminate this Agreement, in whole or in part, for convenience and without cause, at any time upon thirty (30) days' written notice to Vendor.

B. In the event of any default by Vendor, City has the right to terminate this Agreement for cause, upon ten (10) days' written notice to Vendor.

C. Vendor has the right to terminate this Agreement only for cause, in the event of material and substantial breach by City, or by written mutual agreement to terminate.

D. In the event City terminates under subsections (A) or (B) of this section, the following shall apply: Upon City's delivery of the referenced notice to Vendor, Vendor shall

discontinue all services in connection with the performance of this Agreement and shall proceed to cancel promptly all existing orders and contracts insofar as such orders and contracts are chargeable to this Agreement. Within thirty (30) days after such notice of termination, Vendor shall submit a statement showing in detail the goods and/or services satisfactorily performed under this Agreement to the date of termination. City shall then pay Vendor that portion of the charges, if undisputed. The parties agree that Vendor is not entitled to compensation for services it would have performed under the remaining term of the Agreement except as provided herein.

18.01 INDEMNIFICATION

Vendor shall defend (at the option of City), indemnify, and hold City, its successors, assigns, officers, employees and elected officials harmless from and against all suits, actions, legal proceedings, claims, demands, damages, costs, expenses, attorney's fees, and any and all other costs or fees arising out of, or incident to, concerning or resulting from the fault of Vendor, or Vendor's agents, employees or subcontractors, in the performance of Vendor's obligations under this Agreement, no matter how, or to whom, such loss may occur. Nothing herein shall be deemed to limit the rights of City or Vendor (including, but not limited to the right to seek contribution) against any third party who may be liable for an indemnified claim.

19.01 COMPLIANCE WITH LAWS, CHARTER AND ORDINANCES

A. Vendor, its agents, employees and subcontractors shall use best efforts to comply with all federal and state laws, City's Charter and Ordinances, as amended, and with all applicable rules and regulations promulgated by local, state and national boards, bureaus and agencies.

B. Vendor acknowledges and understands that City has adopted a Storm Water Management Program (SWMP) and an Illicit Discharge Ordinance, Sections 14-139 through 14-152 of the City's Code of Ordinances, to manage the quality of the discharges from its Municipal Separate Storm Sewer System (MS4) and to be in compliance with the requirements of the Texas Commission on Environmental Quality (TCEQ) and the Texas Pollutant Discharge Elimination System (TPDES). The Services Provider agrees to perform all operations on City-owned facilities in compliance with the City's Illicit Discharge Ordinance to minimize the release of pollutants into the MS4. The Services Provider agrees to comply with of the City's stormwater control measures, good housekeeping practices and any facility specific stormwater management operating procedures specific to a certain City facility. In addition, the Services Provider agrees to comply with any applicable TCEQ Total Maximum Daily Load (TMDL) Requirements and/or I-Plan requirements.

20.01 ASSIGNMENT AND DELEGATION

The parties hereby bind themselves, their successors, assigns and legal representatives to each other with respect to the terms of this Agreement. Neither party shall assign, sublet or transfer any interest in this Agreement without prior written authorization of the other party.

21.01 NOTICES

All notices and other communications in connection with this Agreement shall be in writing and shall be considered given as follows:

1. When delivered personally to recipient's address as stated in this Agreement; or
2. Three (3) days after being deposited in the United States mail, with postage prepaid to the recipient's address as stated in this Agreement.

Notice to Vendor:

Chemtrade Chemicals, Inc.
155 Gordon Baker Road, Suite 300
Toronto, Ontario, Canada M2H3N5

Notice to City:

City Manager		Stephen L. Sheets, City Attorney
221 East Main Street	AND TO:	309 East Main Street
Round Rock, TX 78664		Round Rock, TX 78664

Nothing contained herein shall be construed to restrict the transmission of routine communications between representatives of City and Vendor.

22.01 APPLICABLE LAW; ENFORCEMENT AND VENUE

This Agreement shall be enforceable in Round Rock, Texas, and if legal action is necessary by either party with respect to the enforcement of any or all of the terms or conditions herein, exclusive venue for same shall lie in Williamson County, Texas. This Agreement shall be governed by and construed in accordance with the laws and court decisions of the State of Texas.

23.01 EXCLUSIVE AGREEMENT

This document, and all appended documents, constitutes the entire Agreement between Vendor and City. This Agreement may only be amended or supplemented by mutual agreement of the parties hereto in writing, duly authorized by action of the City Manager or City Council.

24.01 DISPUTE RESOLUTION

If a dispute or claim arises under this Agreement, the parties agree to first try to resolve the dispute or claim by appropriate internal means, including referral to each party's senior management. If the parties cannot reach a mutually satisfactory resolution, then and in that event any such dispute or claim will be sought to be resolved with the help of a mutually selected mediator. If the parties cannot agree on a mediator, City and Vendor shall each select a mediator

and the two mediators shall agree upon a third mediator. Any costs and fees, other than attorney fees, associated with the mediation shall be shared equally by the parties.

City and Vendor hereby expressly agree that no claims or disputes between the parties arising out of or relating to this Agreement or a breach thereof shall be decided by any arbitration proceeding, including without limitation, any proceeding under the Federal Arbitration Act (9 USC Section 1-14) or any applicable state arbitration statute.

25.01 SEVERABILITY

The invalidity, illegality, or unenforceability of any provision of this Agreement or the occurrence of any event rendering any portion or provision of this Agreement void shall in no way affect the validity or enforceability of any other portion or provision of this Agreement. Any such void provision shall be deemed severed from this Agreement, and the balance of this Agreement shall be construed and enforced as if this Agreement did not contain the particular portion or provision held to be void. The parties further agree to amend this Agreement to replace any stricken provision with a valid provision that comes as close as possible to the intent of the stricken provision. The provisions of this section shall not prevent this entire Agreement from being void should a provision which is of the essence of this Agreement be determined to be void.

26.01 MISCELLANEOUS PROVISIONS

Standard of Care. Vendor represents that it employs trained, experienced and competent persons to perform all of the services, responsibilities and duties specified herein and that such services, responsibilities and duties shall be performed in a manner according to generally accepted industry practices.

Time is of the Essence. Vendor understands and agrees that time is of the essence and that any failure of Vendor to fulfill obligations for each portion of this Agreement within the agreed timeframes will constitute a material breach of this Agreement. Vendor shall be fully responsible for its delays or for failures to use best efforts in accordance with the terms of this Agreement. Where damage is caused to City due to Vendor's failure to perform in these circumstances, City may pursue any remedy available without waiver of any of City's additional legal rights or remedies.

Force Majeure. Neither City nor Vendor shall be deemed in violation of this Agreement if it is prevented from performing any of its obligations hereunder by reasons for which it is not responsible as defined herein. However, notice of such impediment or delay in performance must be timely given, and all reasonable efforts undertaken to mitigate its effects.

Multiple Counterparts. This Agreement may be executed in multiple counterparts, any one of which shall be considered an original of this document; and all of which, when taken together, shall constitute one and the same instrument.

IN WITNESS WHEREOF, City and Vendor have executed this Agreement on the dates indicated.

City of Round Rock, Texas

By: _____
Printed Name: _____
Title: _____
Date Signed: _____

Chemtrade Chemicals, Inc.

By: _____
Printed Name: _____
Title: _____
Date Signed: _____

Attest:

By: _____
Sara L. White, City Clerk

For City, Approved as to Form:

By: _____
Stephan L. Sheets, City Attorney



City of Round Rock, Texas
Purchasing Division
221 East Main Street
Round Rock, Texas 78664-5299
www.roundrocktexas.gov

INVITATION FOR BID

Water Treatment Chemicals

SOLICITATION – IFB No. 16-013

AUGUST 2016

Exhibit "A"

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**CITY OF ROUND ROCK
INVITATION FOR BID
Water Treatment Chemicals**

**PART I
GENERAL**

1. **PURPOSE:** The City of Round Rock, herein after "the City" seeks formal bids to establish a multiple year agreement with a qualified person, firm or corporation, herein after "Respondent", to provide all equipment, material and labor necessary to supply and deliver various water supply treatment chemicals for treating potable water supplies located at various locations throughout the City of Round Rock, Texas.
2. **BACKGROUND:** The City of Round Rock operates a fifty-two (52) million per day surface water treatment plant, a five (5) million gallons per day ground water plant and a six (6) million gallons per day waste water effluent reuse plant, each facility uses bulk treatment chemicals in their treatment processes.
3. **ATTACHMENTS:** Attachment A through C, are herein made part of this invitation for bid:
 - 3.1 **Attachment A:** Bid Form
 - 3.2 **Attachment B:** Respondent's Reference Sheet
 - 3.3 **Attachment C:** Addendum Acknowledgment Form
4. **CLARIFICATION:** For questions or clarification of specifications, you may contact:

Mike Schurwon, CPPB, CTPM
Purchaser
Purchasing Division
City of Round Rock
E-mail: mschurwon@roundrocktexas.gov

The individual listed above may be contacted by e-mail for clarification of the specifications only. No authority is intended or implied that specifications may be amended or alterations accepted prior to solicitation opening without written approval of the City of Round Rock through the Purchasing Department.
5. **RESPONDENT QUALIFICATIONS:** The City has established the following minimum qualifications. Respondents who do not meet the minimum qualifications will not be considered for award. The Respondent shall:
 - 5.1. Be firms, corporations, individuals or partnerships normally engaged in providing and delivering various water supply treatment chemicals for treating potable water supplies as specified herein and have adequate organization, facilities, equipment, financial capability, and personnel to ensure prompt and efficient service to the City;
 - 5.2. Provide all labor, supplies and materials required to satisfactorily perform the services as specified herein. The City shall not be responsible for any Respondent's tools, equipment or materials lost or damaged during the performance of the services specified herein;
 - 5.3. Be domiciled in or have a home office inside the United States. Respondents domiciled outside the United States, or not having a home office inside the United States will not be included for consideration in this procurement process.

City of Round Rock
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6. **SUBCONTRACTORS:** Respondent shall not subcontract or otherwise engage subcontractors to perform required services. The City seeks to do business directly with a company experienced in the supply and deliver of various water supply treatment chemicals for treating potable water supplies.
7. **DAMAGE:** The Respondent shall be responsible for damage to the City's equipment and / or property, the workplace and its contents by its work, negligence in work, its personnel and equipment usage.
8. **SAFETY:** The City reserves the right to remove any employee from City property for violation of federal, state, and local health, safety and environmental laws, ordinances, rules and regulations. The Respondent shall:
 - 8.1. Ensure that all employees comply with all Occupational Safety and Health Administration (OSHA), State and City safety and occupational health standards and other applicable federal, state, and local health, safety, and environmental laws ordinances, rules and regulations in the performance of these services;
 - 8.2. Be held responsible for the safety of their employees and unsafe acts or conditions that may cause injury or damage to any persons or property within and around the work site. In case of conflict, the most stringent safety requirement shall govern;
 - 8.3. Indemnify and hold the City harmless from and against all claims, demands, suits, actions, judgments, fines penalties and liability of every kind arising from the breach of the Successful Respondents' obligations under this paragraph.
9. **PRICING:** The Respondent shall determine and submit a fixed cost for the work and shall include all incidental costs, labor, overhead charges, travel, payroll expenses, freight, equipment acquisition and maintenance, demurrage, fuel surcharges, delivery charges, costs associated with obtaining permits, insurance, bonds and risk management. No separate line item charges shall be permitted for either response or invoice purposes.
10. **PRICE INCREASE:** Contract prices for the various water supply treatment chemicals shall remain firm throughout the initial twelve (12) month term of the contract. A price increase to the agreement may be considered at renewal time each year and shall be equal to the consumer price index for that year, but at no time can the increase be greater than 25% of the contract price.
 - 10.1. **Consumer Price Index (CPI):** Price adjustments will be made in accordance with the percentage change in the U.S. Department of Labor Consumer Price Index (CPI-U) for all Urban Consumers. The price adjustment rate will be determined by comparing the percentage difference between the CPI in effect for the base year six-month average (January through June OR July through December); and each (January through June OR July through December six-month average) thereafter. The percentage difference between those two CPI issues will be the price adjustment rate. No retroactive contract price adjustments will be allowed. The Consumer Price Index (CPI) is found at the Bureau of Labor Statistics, Consumer Price Index website: <http://www.bls.gov/cpi/>
 - 10.2. **Procedure to Request Increase:**
 - 10.2.1. Mail the written price increase request with the rate detail comparison and comprehensive calculation to the designated City Contract Specialist a minimum of 45 days prior to each renewal period. The detailed written calculation will be verified and confirmed. All written requests for increases must include the City of Round Rock contract number, solicitation reference information and contact information for the authorized representative requesting the increase. Price increase requests shall be sent by mail to:

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**City of Round Rock
Purchasing Department
Attn: Contract Specialist
221 East Main Street
Round Rock, TX 79664-5299**

- 10.2.2. Upon receipt of the request, the City reserves the right to either, accept the escalation and make change to the purchase order within 30 days of the request, negotiate with the Vendor or cancel the agreement or purchase order if an agreement cannot be reached on the value of the increase.
11. **AGREEMENT TERM:** The terms of the awarded agreement shall include but not be limited to the following:
- 11.1 The term of the Agreement shall begin from date of award and shall remain in full force for six (60) months.
- 11.2 The City reserves the right to review the awarded respondents' performance anytime during the contract term.
- 11.3 If the awarded respondent fails to perform its duties in a reasonable and competent manner, the City shall give written notice to the respondent of the deficiencies and the respondent shall have thirty (30) days to correct such deficiencies. If the respondent fails to correct the deficiencies with the thirty (30) days, the City may terminate the agreement by giving the respondent written notice of termination and the reason for the termination.
12. **ACCEPTANCE/INSPECTION:** Acceptance inspection should not take more than five (5) working days. The awarded respondent will be notified within the time frame if the services delivered are not in full compliance with the specifications. In the event the services are not performed to the satisfaction of the City, the product will be rejected. Returned and/or rejected product shall be transported off-site at no cost to the City. City facilities that require cleaning or decontamination due to contractor negligence shall be remediated at no cost to the City. If any agreement or purchase order is cancelled for non-acceptance, the needed services may be purchased elsewhere and the vendor may be charged liquidated damages.

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PART II
SPECIFICATIONS

SCOPE: The City of Round Rock requests various water supply treatment chemicals for treating potable water supplies located at various locations throughout the City of Round Rock, Texas.

1. **SERVICE REQUIREMENTS:** Services shall be performed and products deliver to the following locations at:

**Water Plant
5494 N. IH 35
Round Rock, Texas 78681**

**Lake Creek Well Site
310 S. Burnet Street
Round Rock, TX 78664**

**Brushy Creek Regional Waste Water Facility
3939 Palm Valley Blvd
Round Rock, TX 78664**

2. **RAW WATER CHARACTERISTICS**

<u>Constituent</u>	<u>Average Concentration or Range</u>
Hardness	160 to 180 mg/L
Turbidity	1.5 to 4.0 NTU
Alkalinity	165 to 185 mg/L
Temperature	10 to 30 degrees Celsius
pH	7.2 to 7.8

3. **CHEMICAL SPECIFICATIONS:** All chemicals specified herein shall meet with the intended use, critical requirements and delivery specifications outlined on itemized chemical list on pages 13 - 20 of this solicitation.
4. **CHEMICAL TESTING:** Sample testing shall be required for Liquid Aluminum Sulfate, Liquid Aluminum Sulfate with 2% Copper Sulfate, Liquid Cationic Polymer, Aluminum Chlorohydrate and Belt Press Polymer.
- 4.1 Testing instructions are specified on itemized chemical list, pages 13 - 20 of this solicitation.
- 4.2 The prospective low bidder(s) shall be required to submit the chemical product samples for testing no later than (7) days from the date the chemical samples are requested by the City.
- 4.3 Failure to submit the required chemical samples for testing may disqualify a response for consideration for award.
5. **FREIGHT:** Price shall include FOB Destination, pre-paid and allowed unless otherwise specified in writing. Price shall be inclusive of demurrage charges. No fuel surcharges shall be allowed.

6. POINT OF CONTACT / DESIGNATED REPRESENTATIVE:

6.1 Respondent's point of contact: In order to maintain consistent standards of quality work performed across the City, the City shall be provided with a designated and identified point of contact upon award of the contract to include contact information. The City's designated representative shall be notified by the Respondent immediately should the point of contact change.

6.2 The City's designated representative: Upon contract award, the City's designated representative shall be:

**Kim Lutz
Senior Utility Service Manager
Water Treatment Plant
E-mail: kiml@roundrocktexas.gov**

7 WORKFORCE: Successful Respondent shall:

7.1 Ensure Respondent's employees perform the services in a timely, professional and efficient manner;

7.2 Ensure Respondent's employees, while working on City property, wear a company uniform that clearly identifies them as the Respondent's employee;

7.3 Employ all personnel for work in accordance with the requirements set forth by the United States Department of Labor. The City reserves the right to verify citizenship or right to work in the United States.

8 ORDER QUANTITY: The quantities shown on the solicitation are estimates only. No guarantee of any minimum or maximum purchase is made or implied. The City will only order the goods/services needed to satisfy requirements within budgetary constraints, which may be more or less than indicated.

9 PERMITS: The Successful Respondent shall obtain all necessary permits, licenses, and/or certificates required by federal, state and local laws, ordinances, rules or regulations for the completion and delivery of goods/services as specified herein.

PART III

SCHEDULE AND RESPONSE INSTRUCTIONS

1. **SCHEDULE OF EVENTS:** It is the City's intention to comply with the following solicitation timeline:

EVENT	DATE
Solicitation released	August 18, 2016
Deadline for submission of questions	August 25, 2016 @ 5:00 PM, CST
City responses to questions or addendums	August 30, 2016 @ 5:00 PM, CST
Deadline for submission of responses	September 8 , 2016 @ 3:00 PM, CST

All questions regarding the solicitation shall be submitted in writing by **August 25, 2016 @ 5:00 p.m., CST** on the due date noted above. A copy of all the questions submitted and the City's response to the questions shall be posted on the City's webpage in the form of an addendum at:

<http://www.roundrocktexas.gov/departments/purchasing/purchasing-active-solicitations/> <http://esbd.cpa.state.tx.us/>

Questions shall be submitted to the City contact named herein. The City reserves the right to modify these dates. Notice of date change will be posted to the City's website.

2. **SOLICITATION UPDATES:** Respondents shall be responsible for monitoring the City's website at <http://www.roundrocktexas.gov/departments/purchasing/purchasing-active-solicitations/> <http://esbd.cpa.state.tx.us/> for any updates pertaining to the solicitation described herein. Various updates may include addendums, cancelations, notifications, and any other pertinent information necessary for the submission of a correct and accurate response. The City will not be held responsible for any further communication beyond updating the website.
3. **RESPONSE DUE DATE:** Signed and sealed responses are due at or before **September 8, 2016, @ 3:00 p.m., CST** on the due date noted in Part III, Section 1. Mail or hand deliver sealed responses to:

City of Round Rock – 1st Floor Receptionist Desk
Attn: Mike Schurwon, CPPB, CTPM
Purchasing Department
221 E. Main Street
Round Rock, Texas 78664-5299

- 3.1 Sealed responses shall be clearly marked on the outside of packaging with the company name, solicitation name (**Water Treatment Chemicals**), bid number (**IFB-16-013**), due date and "**DO NOT OPEN**".
- 3.2 Facsimile or electronically transmitted responses are not acceptable.
- 3.3 Responses cannot be altered or amended after opening.
- 3.4 No response can be withdrawn after opening without written approval from the City for an acceptable reason.
- 3.5 The City will not be bound by any oral statement or offer made contrary to the written specifications.
- 3.6 Samples and/or copies shall be provided at the Respondent's expense, and shall become the property of the City.

4. **BEST VALUE EVALUATION AND CRITERIA:** The City reserves the right to reject any or all responses, or to accept any response deemed most advantageous, or to waive any irregularities or informalities in the response received that best serves the interest and at the sole discretion of the City. All solicitations received may be evaluated based on the best value for the City. In determining best value, the City may consider:
- 4.1 Purchase price;
 - 4.2 Reputation of Respondent and of Respondent's goods and services;
 - 4.3 Quality of the Respondent's goods and services;
 - 4.4 The extent to which the goods and services meet the City's needs;
 - 4.5 Respondent's past performance with the City;
 - 4.6 The total long-term cost to the City to acquire the Respondent's goods or services;
 - 4.7 Any relevant criteria specifically listed in the solicitation.
- Respondents may be contacted for clarification of bid and/or to discuss details of the services they are proposing. This may include a presentation and/or the request for additional material/information to clarify.
5. **AWARD:** The City reserves the right to enter into an Agreement or a Purchase Order with a single award, split award, primary and secondary award, non-award, or use any combination that best serves the interest and at the sole discretion of the City. Award announcement will be made upon City Council approval of staff recommendation and executed agreement. Award announcement will appear on the City's website at <http://www.roundrocktexas.gov/departments/purchasing/purchasing-active-solicitations/>
6. **POST AWARD MEETING:** The City and Successful Respondent(s) may have a post award meeting to discuss, but not be limited to the following:
- 6.1 The method to provide a smooth and orderly transition of services performed from the current contractor;
 - 6.2 Provide City contact(s) information for implementation of agreement.
 - 6.3 Identify specific milestones, goals and strategies to meet objectives.
7. **NON-APPROPRIATION:** The resulting Agreement is a commitment of the City's current revenues only. It is understood and agreed the City shall have the right to terminate the Agreement at the end of any City fiscal year if the governing body of the City does not appropriate funds sufficient to purchase the estimated yearly quantities, as determined by the City's budget for the fiscal year in question. The City may affect such termination by giving Vendor a written notice of termination at the end of its then current fiscal year.
8. **INTERLOCAL COOPERATIVE CONTRACTING (PIGGYBACK):** Other governmental entities may be extended the opportunity to purchase off of the City's agreements, with the consent and agreement of the awarded Vendor(s) and the City. Such consent and agreement shall be conclusively inferred from lack of exception to this clause in a Respondent's submittal. However, all parties indicate their understanding and hereby expressly agree that the City is not an agent of, partner to, or representative of those outside agencies or entities and that the City is not obligated or liable for any action or debts that may arise out of such independently-negotiated "piggyback" procurements.

PART IV
RESPONSE

1. **RESPONSE REQUIREMENTS:** The City of Round Rock makes no warranty that this checklist is a full comprehensive listing of every requirement specified in the solicitation. This list is only a tool to assist participating Respondents in compiling their final responses. Respondents are encouraged to carefully read the entire solicitation.

Respondents shall submit one (1) evident signed "Original" and two (2) copies of the response requirements including any required attachments. The samples and/or copies shall be provided at the Respondent's expense, and shall become the property of the City.

This invitation for bid (IFB) does not commit the City to contract for any supply or service. Respondents are advised that the City will not pay for any administrative costs incurred in response preparation to this IFB; all costs associated with responding to this IFB will be solely at the interested parties' expense. Not responding to this IFB does not preclude participation in any future RFP/RFQ/IFB.

For your bid to be responsive, all required items identified below shall be submitted with your proposal.

Attachment A: Responses shall be submitted on itemized, signed Bid Sheet provided herein. Failure to itemize or sign solicitation may result in disqualification. Submission of responses on forms other than the City's Solicitation Document may result in disqualification of the response.

Attachment B: Provide the name, address, telephone number and **E-MAIL** of at least three (3) Municipal, Government agencies or firms of comparable size that have utilized similar service within the last two (2) years. City of Round Rock references are not applicable. References may be checked prior to award. Any negative responses received may result in disqualification of submittal.

Attachment C: Provide signed copy of the Addendum Acknowledgement Form or a signed copy of each issued addendum with bid upon submission.

Additional Information Requested:

Contract Information: Respondent shall provide information of any current established contract with a local City, County, Municipality, Cooperative Agreement, Comptroller of Public Accounts (CPA) Texas Smart Buy Contract, Texas Multiple Award Schedule (TXMAS), General Services Administration (GSA), Inter-local Agreement, or any other contractual resource.

PART V
CONFIDENTIALITY OF CONTENT

1. **CONFIDENTIALITY OF CONTENT:** All documents submitted in response to a solicitation shall be subject to the Texas Public Information Act. Following an award, responses are subject to release as public information unless the response or specific parts of the response can be shown to be exempt from the Texas Public Information Act. Pricing is not considered to be confidential under any circumstances.
- 1.1 Information in a submittal that is legally protected as a trade secret or otherwise confidential must be clearly indicated with stamped, bold red letters stating "CONFIDENTIAL" on that section of the document. The City will not be responsible for any public disclosure of confidential information if it is not clearly marked as such.
- 1.2 If a request is made under the Texas Public Information Act to inspect information designated as confidential, the Respondent shall, upon request from the City, furnish sufficient written

reasons and information as to why the information should be protected from disclosure. The matter will then be presented to the Attorney General of Texas for final determination.

PART VI

GENERAL TERMS AND CONDITIONS / INSURANCE REQUIREMENTS

(ITEMS BELOW APPLY TO AND BECOME A PART OF THE CONTRACT)

1. **INSURANCE:** The Respondent shall meet or exceed all insurance requirements set forth by the Insurance Requirements as identified on the City's website at: http://www.roundrocktexas.gov/wp-content/uploads/2014/12/corr_insurance_07.20112.pdf
2. **DEFINITIONS, TERMS AND CONDITIONS:** By submitting a response to this solicitation, the Respondent agrees that the City's standard Definitions, Terms and Conditions, in effect at the time of release of the solicitation, shall govern unless specifically provided otherwise in a separate agreement or on the face of a purchase order. Said Definitions, Terms and Conditions are subject to change without notice. It is the sole responsibility of respondents to stay apprised of changes. The City's Definitions, Terms and Conditions can be obtained from the City's website at: http://www.roundrocktexas.gov/wp-content/uploads/2014/12/corr_t c revised_07.2011.pdf
3. **PROMPT PAYMENT POLICY:** Payments will be made in accordance with the Texas Prompt Payment Law, Texas Government Code, Subtitle F, Chapter 2251. The City will pay Vendor within thirty days after the acceptance of the supplies, materials, equipment, or the day on which the performance of services was completed or the day, on which the City receives a correct invoice for the supplies, materials, equipment or services, whichever is later. The Vendor may charge a late fee (fee shall not be greater than that which is permitted by Texas law) for payments not made in accordance with this prompt payment policy; however, this policy does not apply to payments made by the City in the event:
 - 3.1 There is a bona fide dispute between the City and Vendor concerning the supplies, materials, services or equipment delivered or the services performed that causes the payment to be late; or
 - 3.2 The terms of a federal agreement, grant, regulation, or statute prevent the City from making a timely payment with Federal Funds; or
 - 3.3 There is a bona fide dispute between the Vendor and a subcontractor or between a subcontractor and its suppliers concerning supplies, material, or equipment delivered or the services performed which caused the payment to be late; or
 - 3.4 The invoice is not mailed to the City in strict accordance with instructions, if any, on the purchase order or agreement or other such contractual agreement.

PART VII

Water Treatment Chemicals

WATER TREATMENT CHEMICAL LIST ITEMIZED AS FOLLOWS:

CHLORINE OR EQUIVALENT

1. All chlorine delivered shall:
 - 1.1. Be approved as a drinking water additive in accordance with National Sanitation Foundation (NSF)/American National Standards Institute (ANSI) Standard 60.
 - 1.2. Be filtered with a media removing eighteen to twenty microns prior to filling any container for delivery to the City of Round Rock.
 - 1.3. Be 99.5 percent pure by volume.
 - 1.4. Contain no soluble mineral or organic substances in quantities producing deleterious or injurious effects on the health of persons consuming water that has been treated properly with liquid chlorine.
 - 1.5. Not to exceed 150 parts per million (ppm) moisture by weight.
 - 1.6. Not to exceed 10 ppm lead, 1 ppm mercury, 3 ppm arsenic or 30 ppm of the sum of all heavy metals.
 - 1.7. Be in conformance with all applicable federal, state and local laws.
 - 1.8. Have a certified weight ticket.
 - 1.9. Be in clean, properly identified and labeled vehicles used only for the transport and delivery of chlorine.
 - 1.10. Use City owned equipment (e.g.; hoist apparatus, hand truck, etc.)
 - 1.11. Be delivered to:

**Water Plant
5494 N. IH 35
Round Rock, Texas 78681**

And

**Lake Creek Well Site
310 S. Burnet St.
Round Rock, Texas 78664**

And

**Brushy Creek Regional Wastewater Plant
3939 Palm Valley Blvd.
Round Rock, Texas 78664**

2. All containers shall:
 - 2.1. Meet all applicable Department of Transportation and Chlorine Institute, Inc. standards.
 - 2.2. Open with reasonable ease, using a wrench not greater than six inches in length.
 - 2.3. Have a new or rebuilt valve installed prior to delivery.
 - 2.4. Be visually inspected, vacuumed, exterior repainted, and leak tested prior to delivery.

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- 2.5. Successfully pass hydrostatic testing at least every five years.
- 2.6. Have container number and tare weight clearly visible and legible.
3. The successful Respondent shall maintain a twenty-four (24) hour emergency service for liquid chlorine emergencies that includes, at a minimum, the following:
 - 3.1. Trained and certified personnel in hazardous materials response that shall be on-site within two (2) hours of emergency notification from the City.
 - 3.2. All necessary equipment and apparatus for managing and remediating any emergency leak or release of chlorine from Respondent supplied cylinders or containers.
 - 3.3. Procedures for the removal and disposal of defective or leaking cylinders or containers.
4. **THE SUCCESSFUL RESPONDENT SHALL, AT NO ADDITIONAL COST, PROVIDE ANNUAL TRAINING TO CITY EMPLOYEES ON THE CHARACTERISTICS AND SAFE HANDLING PRACTICES OF CHLORINE GAS.**

LIQUID ALUMINUM SULFATE OR EQUIVALENT

1. All Liquid Aluminum Sulfate delivered shall:
 - 1.1. Be approved as a drinking water additive in accordance with NSF/ANSI Standard 60.
 - 1.2. Contain no less than 8 percent water-soluble aluminum oxide.
 - 1.3. Contain no less than .35 percent water soluble iron.
 - 1.4. Be free of insoluble and suspended matter, including but not limited to: chips, dirt, grit and all other foreign matter.
 - 1.5. Possess adequate clarity for the easy reading of measuring devices.
 - 1.6. Be in conformance with all applicable federal, state and local laws.
 - 1.7. Have a certified weight ticket.
 - 1.8. Be in clean, properly identified and labeled trucks used only for the transport and delivery of liquid aluminum sulfate.
 - 1.9. Be delivered into four 10,000-gallon bulk storage tanks through a standard 2-inch female quick connect.
 - 1.10. Be delivered to:

**Water Plant
5494 N. IH 35
Round Rock, Texas 78681**

2. Special Requirements
 - 2.1. The City shall request chemical samples for Liquid Aluminum Sulfate for testing from any prospective low bidder(s) after the bid opening date.
 - 2.2. Respondents shall ship, at their own expense, a sample of the product to be bid to:
**Kim Lutz
2008 Enterprise Dr.
Round Rock, TX 78664**
 - 2.3. The quantity of chemical sample product requested by the City shall be at least five (5) gallons and must be received at the above address.

LIQUID ALUMINUM SULFATE with 2% Copper Sulfate OR EQUIVALENT

1. All Liquid Aluminum Sulfate delivered shall:
 - 1.1. Be approved as a drinking water additive in accordance with NSF/ANSI Standard 60.
 - 1.2. Contain no less than 8 percent water-soluble aluminum oxide.
 - 1.3. Contain no less than .35 percent water soluble iron.
 - 1.4. Be free of insoluble and suspended matter, including but not limited to: chips, dirt, grit and all other foreign matter.
 - 1.5. Possess adequate clarity for the easy reading of measuring devices.
 - 1.6. Be delivered in conformance with all applicable federal, state and local laws.
 - 1.7. Have a certified weight ticket.
 - 1.8. Be in a clean, properly identified and labeled trucks used only for the transport and delivery of liquid aluminum sulfate.
 - 1.9. Be delivered into four 10,000-gallon bulk storage tanks through a standard 2-inch female quick connect.
 - 1.10. Be delivered to:

Water Plant
5494 N. IH 35
Round Rock, Texas 78681
2. Special Requirements
 - 2.1 The City shall request chemical samples for Liquid Aluminum Sulfate with 2% copper sulfate for testing from any prospective low bidder(s) after the bid opening date.
 - 2.2 Respondents shall ship, at their own expense, a sample of the product to be bid to:

Kim Lutz
2008 Enterprise Dr.
Round Rock, TX 78664
 - 2.3 The quantity of chemical sample product requested by the City shall be at least five (5) gallons and must be received at the above address.

ALUMINUM CHLOROHYDRATE OR EQUIVALENT

1. All Aluminum Chlorohydrate delivered shall:
 - 1.1. Be approved as a drinking water additive in accordance with NSF/ANSI Standard 60.
 - 1.2. Contain approximately 50% aluminum chlorohydrate by weight.
 - 1.3. Contain no more than 100 ppm Fe₂O₃.
 - 1.4. Contain a relative basicity of 83%.
 - 1.5. Be free of insoluble and suspended matter, including but not limited to: chips, dirt, grit and all other foreign matter.
 - 1.6. Possess adequate clarity for the easy reading of measuring devices.
 - 1.7. Be delivered in conformance with all applicable federal, state and local laws.
 - 1.8. Have a certified weight ticket.
 - 1.9. Be in a clean, properly identified and labeled trucks used only for the transport and delivery of aluminum chlorohydrate.

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1.10. Be delivered into four 10,000-gallon bulk storage tanks through a standard 2-inch female quick connect.

1.11. Be delivered to:

**Water Plant
5494 N. IH 35
Round Rock, Texas 78681**

2. Special Requirements

2.1. The City may request chemical samples for testing from any prospective low bidder(s) after the bid opening date.

2.2. Respondents shall ship, at their own expense, a sample of the product to be bid to:

**Kim Lutz
2008 Enterprise Dr.
Round Rock, TX 78664**

2.3. The quantity of the chemical sample product the City may request shall be at least five (5) gallons and must be received at the above address.

HYDROFLUOSILICIC ACID 23% OR EQUIVALENT

1. All Hydrofluosilicic Acid delivered shall:

- 1.1. Be approved as a drinking water additive in accordance with NSF/ANSI Standard 60.
- 1.2. Be free of insoluble and suspended matter, including but not limited to: chips, dirt, grit and all other foreign matter.
- 1.3. Contain between 20% and 30% Hydrofluosilicic Acid.
- 1.4. Maximum dosage of 1.2 mg/L fluoride ion.
- 1.5. Be delivered in conformance with all applicable federal, state and local laws.
- 1.6. Have a certified weight ticket.
- 1.7. Be in a clean, properly identified and labeled trucks used only for the transport and delivery of hydrofluosilicic acid.
- 1.8. Be delivered into a bulk storage tank through a standard 2-inch female quick connect.
- 1.9. Be delivered to:

**Water Plant
5494 N. IH 35
Round Rock, Texas 78681**

And

**Lake Creek Well Site
310 S. Burnet St.
Round Rock, Texas 78664**

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2. The successful Respondent shall maintain a twenty-four (24) hour emergency service for hydrofluosilicic acid emergencies that includes, at a minimum, the following:
 - 2.1. Trained and certified personnel in hazardous materials response that shall be on-site within two (2) hours of emergency notification from the City.
 - 2.2. All necessary equipment and apparatus for managing and remediating an emergency leak or release of hydrofluosilicic acid.

COAGULANT AID (Liquid Cationic Polymer) OR EQUIVALENT

NOTE: Because the quality of the City's raw water changes periodically, the City is interested in receiving bids for various weights of polymer. Data characterizing the raw water quality is included in Part III, Para. No. 8 for use in product selection. Respondents may also submit polymer blends. The following specifications apply to all coagulant aids:

1. All Liquid Cationic Polymer shall:
 - 1.1. Be approved as a drinking water additive in accordance with NSF/ANSI Standard 60.
 - 1.2. Have a high molecular weight.
 - 1.3. Be cationic.
 - 1.4. Be a liquid that is readily soluble in water at all concentrations.
 - 1.5. Be effective over a pH range of 5.0 to 7.0 Standard Units.
 - 1.6. Be effective over a temperature range from five degrees Celsius to 30 degrees Celsius.
 - 1.7. Be resistant to chlorine.
 - 1.8. Contain no less than .35 percent water soluble iron.
 - 1.9. Be free of insoluble and suspended matter, including but not limited to: chips, dirt, grit and all other foreign matter.
 - 1.10. Possess adequate clarity for the easy reading of measuring devices.
 - 1.11. Be delivered in conformance with all applicable federal, state and local laws.
 - 1.12. Have a certified weight ticket.
 - 1.13. Be in clean, properly identified and labeled fifty-five gallon drums.
 - 1.14. Delivered to:

**Water Plant
5494 N. IH 35
Round Rock, Texas 78681**

2. Special Requirements
 - 2.1. The City shall request chemical samples for Liquid Cationic Polymer coagulant aid for testing from any prospective low bidder(s) after the bid opening date.
 - 2.2. Respondents shall ship, at their own expense, a sample of the product to be bid to:
**Kim Lutz
2008 Enterprise Dr.
Round Rock, TX 78664**
 - 2.3. The quantity of chemical sample product requested by the City shall be at least five (5) gallons and must be received at the above address.

SODIUM PERMANGANATE 20% OR EQUIVALENT

1. All Sodium Permanganate delivered shall:

- 1.1 Be approved as a drinking water additive in accordance with NSF/ANSI Standard 60.
- 1.2 Contain 19 to 21.5% sodium permanganate.
- 1.3 Have a pH between 5 and 8 standard units.
- 1.4 Have a specific gravity of 1.15 to 1.17.
- 1.5 Be delivered in conformance with all applicable federal, state and local laws.
- 1.6 Have a certified weight ticket.
- 1.7 Be in clean, properly identified and labeled totes.
- 1.8 Be delivered to:

**Water Plant
5494 N. IH 35
Round Rock, Texas 78681**

2. The successful Respondent shall maintain a twenty-four (24) hour emergency service for Potassium Permanganate emergencies that includes, at a minimum, the following:
 - 2.1. Trained and certified personnel in hazardous materials response that shall be on-site within two (2) hours of emergency notification from the City.
 - 2.2. All necessary equipment and apparatus for managing and remediating an emergency leak or release of sodium permanganate.
 - 2.3. Procedures for the removal and disposal of defective or leaking drums or containers.

BELT PRESS POLYMER OR EQUIVALENT

1. All Belt Press Polymer delivered shall:

- 1.1. Have a high molecular weight.
- 1.2. Have a broad cationic charge.
- 1.3. Be a liquid that is readily soluble in water at all concentrations.
- 1.4. Be effective over a pH range of 5.0 to 7.0 Standard Units.
- 1.5. Be effective over a temperature range from five degrees Celsius to 30 degrees Celsius.
- 1.6. Contain no less than .35 percent water soluble iron.
- 1.7. Be free of insoluble and suspended matter, including but not limited to: chips, dirt, grit and all other foreign matter.
- 1.8. Possess adequate clarity for the easy reading of measuring devices.
- 1.9. Achieve a belt filter cake that is at least 93% solids at optimum dosing rates.
- 1.10. Be delivered in conformance with all applicable federal, state and local laws.
- 1.11. Have a certified weight ticket.
- 1.12. Be in clean, properly identified and labeled fifty-five gallon drums.
- 1.13. Be delivered to:

**Water Plant
5494 N. IH 35
Round Rock, Texas 78681**

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2. Special Requirements

- 2.1. The City shall request chemical samples for Belt Press Polymer for testing purposes from any prospective low bidder(s) after the bid opening date.
- 2.2. Respondents shall ship, at their own expense, a sample of the chemical product to be bid to:
Kim Lutz
2008 Enterprise Dr.
Round Rock, TX 78664
- 2.3. The quantity of chemical sample product requested by the City shall be at least five (5) gallons and must be received at the above address.

LIQUID AMMONIUM SULFATE (LAS) OR EQUIVALENT

- 1. All Liquid Ammonium Sulfate delivered shall:
 - 1.1 Be approved as a drinking water additive in accordance with NSF/ANSI Standard 60.
 - 1.2 Contain no soluble mineral or organic substances in quantities producing deleterious or injurious effects on the health of persons consuming water that has been treated properly with chlorine.
 - 1.3 Contain 10% ammonia (NH₃).
 - 1.4 Be completely soluble in water.
 - 1.5 Be delivered in conformance with all applicable federal, state and local laws.
 - 1.6 Have a certified weight ticket.
 - 1.7 Be in clean, properly identified and labeled vehicles used only for the transport and delivery of liquid ammonium sulfate.
 - 1.8 Be delivered into a bulk storage tank through a standard 2-inch female quick connect.
 - 1.9 Be delivered to the

Water Plant
5494 N. IH 35
Round Rock, Texas 78681

And

Lake Creek Well Site
310 S. Burnet Street
Round Rock, TX 78664

- 2. The successful Respondent shall maintain a local twenty-four (24) hour emergency service for liquid ammonium sulfate emergencies that includes, at a minimum, the following:
 - 2.1 Trained and certified personnel in hazardous materials response that shall be on-site within two (2) hours of emergency notification from the City.
 - 2.2 All necessary equipment and apparatus for managing and remediating an emergency leak or release of liquid ammonium sulfate.

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SODIUM HYDROXIDE (17%) OR EQUIVALENT

1. All Sodium Hydroxide delivered shall:
 - 1.1 Contain 17 – 20% sodium hydroxide.
 - 1.2 Be completely soluble in water.
 - 1.3 Be delivered in conformance with all applicable federal, state and local laws.
 - 1.4 Have a certified weight ticket.
 - 1.5 Be in clean, properly identified and labeled totes used only for the transport and delivery of sodium hydroxide.
 - 1.6 Be delivered to the

**Water Plant
5494 N. IH 35
Round Rock, Texas 78681**

2. The successful Respondent shall maintain a local twenty-four (24) hour emergency service for liquid ammonium sulfate emergencies that includes, at a minimum, the following:
 - 2.1 Trained and certified personnel in hazardous materials response that shall be on-site within two (2) hours of emergency notification from the City.
 - 2.2 All necessary equipment and apparatus for managing and remediating an emergency leak or release of sodium hydroxide.

NOTE: The City of Round Rock reserves the right to request chemical product samples of all other chemicals in addition to the required samples for liquid aluminum sulfate, liquid aluminum sulfate with 2% copper sulfate, liquid cationic polymer coagulant aid, and belt press polymer chemicals.

PART VIII

SOLICITATION INSTRUCTIONS
ITEMS BELOW APPLY TO AND BECOME A PART OF TERMS AND CONDITIONS OF
SOLICITATION
ANY EXCEPTIONS THERETO MUST BE IN WRITING

1. SOLICITATION REQUIREMENTS:

- 1.1 Responding requires pricing per unit shown and extensions. If trade discount is shown on solicitation, it should be deducted and net line extensions shown. Respondents guarantees product offered will meet or exceed specifications identified in this Invitation for Bid (IFB).
- 1.2 Solicitations shall be submitted on Solicitation Sheet. Each response shall be placed in a separate envelope completely and properly identified. Responses must be in the Purchasing Department before the hour and date specified on the solicitation.
- 1.3 Late responses properly identified will be returned to respondent unopened. Late responses will not be considered.
- 1.4 Respond F.O.B. destination, freight, prepaid, & allowed unless otherwise specified on the solicitation. If otherwise, show exact cost to deliver.
- 1.5 Response shall show unit price on quantity and unit of measure specified, extension and show total. In case of errors in extension, unit prices shall govern. Responses subject to unlimited price increase will not be considered.
- 1.6 Submitted prices shall be firm for acceptance 30 days from solicitation opening date. "Discount from List" responses are not acceptance unless requested. Cash discount will not be considered in determining the low response. All cash discounts offered will be taken if earned.
- 1.7 Responses shall give Tax Identification Number, full name and address of respondent. Failure to sign will disqualify response. Person signing response shall show title and authority to bind signatories firm in an agreement. Firm name should appear on each page in the block provided in the upper right corner. Business Entity shall be one (1) of the following: Individual, Partnership, Sole Proprietorship, Estate/Trust, Corporation, Government, or Non-profit, all others shall be specified. **INDIVIDUAL:** List name and number as shown on Social Security Card. **SOLE PROPRIETORSHIP:** List legal name followed by legal business name and Social Security Number. **ALL OTHERS:** List legal name of entity and Tax Identification Number (TIN).
- 1.8 Responses cannot be altered or amended after opening time. Any Alterations made before opening time shall be initialed by respondent or an authorized agent. No response can be withdrawn after opening time without approval of the CITY based on a written acceptable reason.
- 1.9 The City is exempt from State Sales Tax and Federal Excise Tax. Do not include tax in response.
- 1.10 The City reserves the right to accept or reject all or any part of response, waive minor technicalities and award the response to best serve the interests of the City. Split awards may be made at the sole discretion of the City.
- 1.11 Consistent and continued tie responses could cause rejection of responses by the City and/or investigation for antitrust violations.
- 1.12 Telephone, facsimile, and electronically transmitted responses are not acceptable in response to the solicitation.
- 1.13 **CAUTION:** Solicitation invitation allows sufficient time for receipt of the preferred mail response. The City shall not be responsible for responses received late, illegible, incomplete, or otherwise non-responsive.

2. SPECIFICATION:

- 2.1 Any catalog, brand name or manufacturer's reference used in the solicitation is descriptive only (not restrictive), and is used to indicate type and quality desired. Responses on brands of like nature and quality will be considered unless advertised under the provisions of Section 252.022 of the Texas Local Government Code. If other than brand(s) specified is offered, illustrations and complete descriptions of product offered are requested to be made a part of the response. If respondent takes no exceptions to specifications or reference data in response, respondent will be required to furnish brand names, numbers, etc., as specified in the solicitation.
- 2.2 All items on the solicitation shall be new, in first class condition, including containers suitable for shipment and storage, unless otherwise indicated in the solicitation. Verbal agreements to the contrary will not be recognized.
- 2.3 Samples, when requested, must be furnished free of expense to the City. If not destroyed in examination, they will be returned to the respondent, on request, at respondent expense. Each example should be marked with respondents' name and address, City solicitation number and code. Do not enclose in or attach to response.
- 2.4 The City will not be bound by any oral statement or representation contrary to the written specifications of the solicitation.
- 2.5 Manufacturer's standard warranty shall apply unless otherwise stated in the solicitation.

- 3. TIE RESPONSES:** In case of tie responses, the award will be made in accordance with Section 271.901 of the Texas Local Government Code.

4. DELIVERY:

- 4.1 Response shall show number of days required to place material in City's designated location under normal conditions. Failure to state deliver time obligates respondent to complete delivery in fourteen (14) calendar days. Unrealistically short or long delivery promises may cause response to be disregarded. Consistent failure to meet delivery promises without valid reason may cause removal from Vendor list. (See 4.2 following.)
- 4.2 If delay is foreseen, Vendor shall give written notice to the City. The City has the right to extend delivery date if reasons appear valid. Vendor shall keep the City advised at all times of status of order. Default in promised delivery (without acceptable reasons) or failure to meet specifications, authorizes the City to purchase supplies elsewhere and charge full increase, if any, in cost and handling to defaulting Vendor.
- 4.3 No substitutions or cancellations permitted without written approval of the City.
- 4.4 Delivery shall be made during normal working hours only, unless prior approval for late delivery has been obtained from the City, unless otherwise specified in the solicitation.

- 5. INSPECTION AND TESTS:** All goods will be subject to inspection and test by the City to the extent practicable at all times and places. Authorized City personnel shall have access to any supplier's place of business for the purpose of inspecting merchandise. Tests may be performed on samples submitted with the response or on samples taken from regular shipments. If the products tested fail to meet or exceed all conditions and requirements of the specifications, the cost of the sample used and the cost of the testing shall be borne by the supplier. Goods, which have been delivered and rejected in whole or in part, may, at the City's option, be returned to the Vendor or held for disposition at Vendor's risk and expense. **Latent defects may result in revocation of acceptance.**

- 6. AWARD OF AGREEMENT:** A response to a solicitation is an offer to contract with the City based upon the terms, conditions, and specifications contained in the solicitation. Responses do not become agreements or purchase orders unless and until they are accepted by the City through its designees and an agreement or a purchase order is issued. The agreement or purchase order shall be governed, construed, and interpreted under the Charter of the City and the laws of State of Texas. All agreements or purchase orders are subject to the approval of the City Council or Manager.
- 7. PAYMENT:** Vendor shall submit three (3) copies of an invoice showing the agreement or purchase order number on all copies.
- 8. PATENTS AND COPYRIGHTS:** The Respondent agrees to protect the City from claims involving infringements of patents or copyrights.
- 9. RESPONDENT ASSIGNMENTS:** Respondent hereby assigns to the purchaser any and all claims for overcharges associated with this agreement, which arise under the antitrust laws of the State of Texas. TX, Bus. And Comm. Code Ann. Sec. 15.01, et seq. (1967).
- 10. RESPONDENT AFFIRMATION:**
- 10.1 Signing the response with a false statement is a material breach of agreement and shall void the submitted response or any resulting agreements, and the Respondent shall be removed from all Vendor lists. By signature hereon affixed, the respondent hereby certifies that:
 - 10.2 The respondent has not given, offered to give, nor intends to give any time hereafter any economic opportunity, future employment, gift, loan, gratuity, special discount, tip, favor, or service to a public servant in connection with the submitted response.
 - 10.3 The respondent is not currently delinquent in the payment of any debt owed the City.
 - 10.4 Neither the respondent nor the firm, corporation, partnership, or any entity represented by the respondent, or anyone acting for such firm, corporation, or entity has violated the antitrust laws of this State codified in Section 15.01 et. Seq. Texas Business and Commercial Code, or the Federal Antitrust Laws, nor communicated directly or indirectly the response made to any competitor, or any other person engaged in such line of business.
 - 10.5 The respondent has not received compensation for participation in the preparation of the specification for the solicitation.
- 11. NOTE TO RESPONDENTS:** Any terms and conditions attached to response will not be considered unless the respondent specifically references them on the front of the response form. **WARNING:** Such terms and conditions may result in disqualification of the response (e.g. responses with the laws of a state other than Texas requirements for prepayment, Limitations on remedies, etc.) The City of Round Rock can only accept responses which contain all the terms and conditions of its formal solicitation; in particular, all respondents' affirmations and certifications must be included. Submission of responses on forms other than City's form may result in disqualification of your response.
- 12. INQUIRIES:** Inquiries pertaining to Solicitation invitations must give Solicitation number, codes, and opening date.

City of Round Rock
Water Treatment Chemicals
IFB No. 16-013
Class/Item: 885-16
August 2016

**ATTACHMENT A: BID FORM
PURCHASING DEPARTMENT
221 E. Main Street • Round Rock, Texas 78664-5299**

SOLICITATION INFORMATION	Solicitation Number:	16-013	RESPONDENT INFORMATION	Tax ID Number:	74 3104940
	Solicitation Name:	Water Treatment Chemicals		Business Name:	CHEMTRADE CHEMICALS US LLC
	Opening Date:	September 8, 2016		Address:	90 EAST HALSEY ROAD
	Opening Time:	3:00 p.m., CST		Address:	PARSIPPANY, NJ 07054
	Opening Location:	City of Round Rock Attn: City Hall 1 ST Floor Receptionist Desk 221 E. Main Street Round Rock, TX 78664		Contact:	ELIZABETH RYNO
				Telephone:	800 441 2659
				Email:	bids@chemtradelogistics.com

In order to do business with the City of Round Rock you must be registered with the City's Vendor Database. To register, go to: <https://roundrock.munisselfservice.com/Vendors/default.aspx>

Item #	Description	Quantity	Unit of Measure	Unit Price	Extended Price
1	Chlorine (Ton Cylinders) or equivalent	150	Ton	NO BID	
2	Chlorine (150 lb. Cylinders) or equivalent	250	Each	NO BID	
3	Liquid Aluminum Sulfate (Sample testing required) or equivalent	50	DT	\$216.00/ DRY TON	\$10,800.00
4	Liquid Aluminum Sulfate with 2% Copper Sulfate (Sample testing required) or equivalent	500	DT	* \$392.53/DRY TON	\$196,265.00
5	Aluminum Chlorohydrate or equivalent	69	DT	** \$764.00/DRY TON	\$52,716.00
6	Hydrofluosilicic Acid 23% or equivalent	40	Ton	NO BID	
7	Liquid Cationic Polymer, 55 Gallon Drums, (Sample testing required) or equivalent	108,000	Lbs.	NO BID	
8	Sodium Permanganate 20%, tote or equivalent	25,550	Lbs.	NO BID	
9	Belt Press Polymer, 55 Gallon Drums (Sample testing required) or equivalent	550	Gallon	NO BID	

Exhibit "A"

*PRODUCT BEING BID ON FOR ITEM NUMBER 4 IS
CHEMTRADE CHEMICALS CLAR+ION CS8

** PRODUCT BEING BID ON FOR ITEM NUMBER 5 IS
CHEMTRADE CHEMICALS HYPER+ION 1090.

Page 24 of 27

City of Round Rock
Water Treatment Chemicals
IFB No. 16-013
Class/Item: 885-16
August 2016

**ATTACHMENT A: BID FORM
(CONTINUED)**

10	Liquid Ammonium Sulfate (LAS) or equivalent	46,400	Gallon	* \$0.88/GAL	\$40,832.00
11	Sodium Hydroxide (17%), tote or equivalent	3,025	Gallon	NO BID	

***FOR CONVERSION PURPOSE ONLY, PRICE EQUATES TO \$\$176.00/TON**

By the signature hereon affixed, the Respondent hereby certifies that neither the respondent nor the entity represented by the respondent, or anyone acting for such entity has violated the antitrust laws of this State, codified in Section 15.01 et seq., Texas Business and Commerce Code, or the Federal antitrust laws, nor communicated directly or indirectly, the response made to any competitor or any other person engaged in such line of business. Further, by signing and submitting this response the Respondent acknowledges:

- That they have read and fully understand the solicitation and accept all terms and conditions set forth herein.
- The respondent is not currently delinquent in the payment of any debt owed to the City.

Sealed response envelope shall be clearly marked with solicitation name, solicitation number and name of responding entity.

The agreement or purchase order resulting from this solicitation may qualify for Inter-local or Cooperative Contracting (Piggybacking) per the terms outlined in Part III #8 of this solicitation. If applicable, do you agree to "piggyback" purchasing from other governmental agencies?

Yes

No

Response shall include one (1) signed original and two (2) copies of bid response.

ELIZABETH RYNO

Printed Name

Failure to sign response will disqualify response.

Elizabeth Ryno
Authorized Signature

AUGUST 30, 2016

Date

ATTACHMENT A

CHEMTRADE CHEMICALS US LLC HAS NOT BEEN CONVICTED OF OR FOUND LIABLE FOR ANY ACT PROHIBITED BY STATE OR FEDERAL LAW IN ANY JURISDICTION, INVOLVING CONSPIRACY OR COLLUSION WITH RESPECT TO BIDDING ON ANY PUBLIC CONTRACT. CHEMTRADE CHEMICALS CORPORATION HAS APPLIED FOR LENIENCY PURSUANT TO THE DEPARTMENT OF JUSTICE ANTITRUST DIVISION'S CORPORATE LENIENCY POLICY, AND CHEMTRADE CHEMICALS CORPORATION, ITS AFFILIATES, SUBSIDIARIES, OFFICERS, DIRECTORS AND EMPLOYEES ARE COOPERATING WITH THE DEPARTMENT OF JUSTICE PURSUANT TO THE DOJ ANTITRUST DIVISION'S CORPORATE LENIENCY POLICY, WITH RESPECT TO AN ANTITRUST INVESTIGATION OF THE ALUMINUM SULFATE MARKET.

**** PRICING MAY BE ADJUSTED FOR FREIGHT DIFFERENTIALS.**

Exhibit "A"
Page 1 of 27

City of Round Rock
Water Treatment Chemicals
IFB No. 16-013
Class/Item: 885-16
August 2016

**ATTACHMENT B:
RESPONDENT'S REFERENCE SHEET**

PLEASE COMPLETE AND RETURN THIS FORM WITH THE SOLICITATION RESPONSE

SOLICITATION NUMBER: IFB-16-013 WATER TREATMENT CHEMICALS

RESPONDENT'S NAME: ELIZABETH RYNO

DATE: AUGUST 30, 2016

Provide the name, address, telephone number and e-mail of at least three (3) Municipal and/or Government agencies or firms of comparable size that have utilized similar service within the last two (2) years. City of Round Rock references are not applicable. References may be checked prior to award. Any negative responses received may result in disqualification of submittal.

1.	Company's Name	<u>PLEASE SEE ATTACHED</u>	
	Name of Contact	<u></u>	
	Title of Contact	<u></u>	
	E-Mail Address	<u></u>	
	Present Address	<u></u>	
	City, State, Zip Code	<u></u>	
	Telephone Number	<u>()</u>	Fax Number: <u>()</u>
2.	Company's Name	<u></u>	
	Name of Contact	<u></u>	
	Title of Contact	<u></u>	
	E-Mail Address	<u></u>	
	Present Address	<u></u>	
	City, State, Zip Code	<u></u>	
	Telephone Number	<u>()</u>	Fax Number: <u>()</u>
3.	Company's Name	<u></u>	
	Name of Contact	<u></u>	
	Title of Contact	<u></u>	
	E-Mail Address	<u></u>	
	Present Address	<u></u>	
	City, State, Zip Code	<u></u>	
	Telephone Number	<u>()</u>	Fax Number: <u>()</u>

FAILURE TO PROVIDE THE REQUIRED INFORMATION WITH THE SOLICITATION RESPONSE MAY AUTOMATICALLY DISQUALIFY THE RESPONSE FROM CONSIDERATION FOR AWARD.



Water Chemicals Group

90 East Halsey Road
Parsippany, NJ 07054
Tel: 973-515-0900
Fax: 973-515-4461

REFERENCES:

The following is a list of customers Chemtrade Chemicals US LLC currently supplies with the related products being bid on for the 2015 - 2016 calendar years (and prior). Chemtrade Chemicals has also been a long supplier of Liquid Ammonium Sulfate to the City of Round Rock. If you require additional references or more specific information is needed please contact our office at 800-441-2659.

City of Corpus Christi
1201 Leopard Street, 4th Floor
Corpus Christi, TX 78469
Contact: Gerald Goodwin
Email: GeraldGo@cctexas.com
Phone: (361) 826-3173

City of Mission
1201 East 8th
Mission, TX 78572
Contact: Glorina Flores
Email: gflores@missiontexas.us
Phone: (956) 580-8667

City of Laredo
1110 Houston Street
City Hall - 3rd Floor
Laredo, TX 78040
Contact: Enrique Aldape III
Email: Ealdape@ci.laredo.tx.us
Phone: (956) 790-1814

City of Round Rock
Water Treatment Chemicals
IFB No. 16-013
Class/Item: 885-16
August 2016

**ATTACHMENT C:
ADDENDUM ACKNOWLEDGMENT FORM**

NOTE: If multiple addendums have been issued, respondents may complete and return this attachment with their proposal in place of the individual addendums to be submitted. Failure to provide either this form or the individual addendums with signatures may result in disqualification of the proposal.

Addenda Acknowledgment: The undersigned acknowledges the receipt of the following Addenda:

Addendum #:	<u>1 (one)</u>	Dated:	<u>8/29/2016</u>
Addendum #:	<u> </u>	Dated:	<u> </u>
Addendum #:	<u> </u>	Dated:	<u> </u>
Addendum #:	<u> </u>	Dated:	<u> </u>
Addendum #:	<u> </u>	Dated:	<u> </u>

Respondent (Company): CHEMTRADE CHEMICALS US LLC

Signature (in ink): Elizabeth Ryno

Name (Typed/printed): ELIZABETH RYNO

Title: MARKETING SPECIALIST **Date:** AUGUST 30, 2016



CITY OF ROUND ROCK

IFB NO. 16-013

WATER TREATMENT CHEMICALS

Solicitation: 16-013

Addendum No. 1

Date: 08/29/2016

The following response is in reference to all questions submitted for IFB No. 16-013 for Water Treatment Chemicals by the deadline on Thursday, August 25, 2016, @ 5:00 p.m.

Question No. 1: Do we have to be HUB ZONE Company to quote this?

Answer: No.

Question No. 2: Follow up question to HUB Zone Company. Will you consider us for an award if I quote this requisition?

Answer: The award will be based on the best value to the City as stipulated in the IFB No. 16-013 Water Treatment Chemicals, Part III, Schedule and Response Instructions, 4. Best Value Evaluation Criteria, on page 10 of 27.

Question No. 3: Can you please tell me what product is being used for the coagulant aid and belt press polymer? Also, who is supplying the products?

Answer: The water treatment plant coagulant aid currently in use is WC 9923 supplied by Brenntag Southwest, Inc. The belt press polymer has not been in regular use since 2010. The product typically used is FBS 5800 supplied by Fort Bend Services, Inc.

Question No. 4: Will you please provide a copy of the previous bid tabulation, pricing, and chemical list from five (5) years ago?

Answer: For a copy of the previous bid tabulation, please submit an open records request at:

<http://www.roundrocktexas.gov/departments/administration/city-clerk/open-records-center/>

Question No. 5: In reference to the request for products and pricing, may I have the following as it pertains to items #7 and #9. What are the specific names of the products in use today?

Answer: The water treatment plant coagulant aid currently in use is WC 9923 supplied by Brenntag Southwest, Inc. The belt press polymer has not been in regular use since 2010. The product typically used is FBS 5800 supplied by Fort Bend Services, Inc.

Exhibit "A"



CITY OF ROUND ROCK

IFB NO. 16-013

WATER TREATMENT CHEMICALS

Solicitation: 16-013

Addendum No. 1

Date: 08/29/2016

Question No. 6: Normally, how many drums of each are delivered per shipment?

Answer: Water treatment plant polymer is typically delivered in lots of 20 drums. Belt press polymer is typically delivered in lots of 4 drums.

Summit Chemicals

Question No. 7: For Item 5 (Aluminum Chlorhydrate), does the item of measure DT stand for dry ton?

Answer: Yes

Question No. 8: Would it be possible to obtain the bid tab and date of bid for the last time the Aluminum Chlorhydrate was bid?

Answer: The City has never bid Aluminum Chlorhydrate. Therefore, no bid tab exists.

Question No. 9: In reference to liquid aluminum sulfate on page 14, Liquid Aluminum Sulfate, Section 1.8, we can say that our tanks are dedicated to water treatment chemicals. We can provide wash out tickets to certify the cleanliness if possible. Does the City of Round Rock require dedicated tankers for all of their chemical requirements?

Answer: The city requires that the delivery of liquid aluminum sulfate be in a clean, properly identified and labeled truck used only for the transport and delivery of liquid aluminum sulfate. The city will accept a certification of cleanliness in lieu of dedicated tanker trucks as long as other elements of the chemical specification are met.

Question No. 10: The bid states no subcontractors - Would this statement apply to transportation of the chemical?

Answer: No subcontractors applies to all chemical products, however, not transportation of the chemicals.

Question No. 11: Does the manufacturer have to be the owner of the tank trucks or can a common carrier be used?

Answer: No. Common carrier may be used.

Exhibit "A"



CITY OF ROUND ROCK

IFB NO. 16-013

WATER TREATMENT CHEMICALS

Solicitation: 16-013

Addendum No. 1

Date: 08/29/2016

Question No. 12: Is the agreement term as outlined on page 6 of 27, in Part I, General, 11. Agreement Term, 11.1 for six (6) or sixty (60) months?

Answer: Please change Part I, General, 11. Agreement Term, 11.1 to read as follows:

11.1 The term of the Agreement shall begin from dated of award and shall remain in full force for a total of sixty (60) months.

Question No. 13: Would you advise regarding the current pricing for chemical products and current suppliers listed in IFB No. 16-013 for Water Treatment Chemicals?

Answer: For a copy of the current pricing and supplier for chemical products, please submit an open records request at: <http://www.roundrocktexas.gov/departments/administration/city-clerk/open-records-center/>

Approved by: Michael Schurwon
Mike Schurwon, CPPB, CTPM
Purchaser

Date: 08-29-16

By the signatures affixed below this addendum is hereby incorporated into and made a part of the above referenced solicitation.

ACKNOWLEDGED:

CHEMTRADE CHEMICALS US LLC

Vendor

Elizabeth Ryno
Authorized Signature
ELIZABETH RYNO

8/29/2016

Date

RETURN ONE COPY SIGNED COPY OF THIS ADDENDUM TO THE PURCHASING OFFICE WITH YOUR SEALED PROPOSAL. FAILURE TO DO SO MAY AUTOMATICALLY DISQUALIFY YOUR RESPONSE FROM CONSIDERATION FOR AWARD.

Exhibit "A"



Water Chemicals Group

90 East Halsey Road
Parsippany, NJ 07054
Tel: 973-515-0900
Fax: 973-515-4461

City of Round Rock
Bid Number: 16-013 - Water Treatment Chemicals
Bid Opening: September 8, 2016 @ 3:00 pm

DELIVERY REQUIREMENTS

LIQUID ALUMINUM SULFATE
DELIVERY: 2-3 DAYS AFTER RECEIPT OF ORDER

LIQUID ALUMINUM SULFATE W/ 2% COPPER (CLAR+ION CS8)
3-4 DAYS AFTER RECEIPT OF ORDER

ALUMINUM CHLOROHYDRATE (HYPER+ION 1090)
3-5 DAYS AFTER RECEIPT OF ORDER

LIQUID AMMONIUM SULFATE
3-4 DAYS AFTER RECEIPT OF ORDER

If you have any questions or concerns please feel free to contact me.

Sincerely,

Elizabeth Ryno

Marketing Specialist
Ph: 800 631-8050 x 1943
bids@chemtradelogistics.com

Exhibit "A"



Water Chemicals Group

90 East Halsey Road
Parsippany, NJ 07054
Tel: 973-515-0900
Fax: 973-515-4461

**ORDER CONTACT, EMERGENCY CONTACT AND TECHNICAL
SERVICE INFORMATION**

Chemtrade Chemical's Normal operating business hours are Monday – Friday 8:00 AM to 5:00 PM E.S.T.

To place orders, contact your Customer Service Representative:

Krish Thirukumaran
1-844-204-9675
E-mail: cssorders@chemtradelogistics.com
Fax: (647) 255-3655

***After normal business hours, for emergencies and orders please call
1-647-531-9709 and the on-call Customer Service Representative will be
available to assist you. This number will also be provided if you call the regular
Customer Service line.***

**For Technical Service please call (315) 478-2323 or visit our website at:
<http://www.chemtradelogistics.com> or <http://www.generalchemical.com>**

Corporate/Sales Office

Chemtrade Chemicals US LLC.
90 East Halsey Road
Parsippany, NJ 07054

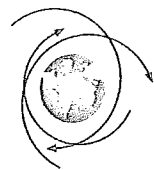
Paul Peters, Business Manager
Phone: (256) 318-4452
Email:
PPeters@chemtradelogistics.com

Robert Naranjo, Rep - Sales
Phone: (360) 440-0293
Email:
RNaranjo@ChemtradeLogistics.com

For Bid/Contract Information:

Elizabeth Ryno
Phone: (800) 441-2659
Direct: (973) 515-1858
Fax: (973) 515-4461
BIDS@chemtradelogistics.com
Bryno@chemtradelogistics.com

Exhibit "A"



CHEMTRADE

DELEGATION OF AUTHORITY

I, Mark Davis, President and Chief Executive Officer of Chemtrade Chemicals US LLC, a Delaware limited liability company ("Chemtrade"), do hereby delegate and appoint the following agents of Chemtrade to execute all municipal contracts and instruments, including bids, proposals and quotations, which in the ordinary course of business are processed by the Marketing Group of the company:

Parul Kachhia-Patel	Lisa Brownlee	Paul Peters	Elizabeth Ryno
Leilina Gossa	Ann Hopler	Andrew Hoffman	Michele Schroeder

Set forth below is a certified copy of the resolution of Chemtrade authorizing such action.

Dated as of the 31st day of January, 2016.

Mark Davis
President and Chief Executive Officer

CERTIFICATE OF SECRETARY

I, Susan Paré, hereby certify that I am the Corporate Secretary of Chemtrade Chemicals US LLC ("Chemtrade") and that set forth below is a true and correct copy of the resolution of the Board of Managers of Chemtrade, adopted by unanimous written consent as of the 10th day of November, 2003 and that the same has not been modified or revoked and is on the date hereof in full force and effect:

RESOLVED that any officer of the Company be, and he hereby is, authorized to delegate, with the right of further delegation, to any other officer, employee or agent of the Company, all or any part of the authority granted to them by the Board of Managers; and that any such delegations may be general or specific and subject to such limitations and restrictions as the delegating officer shall determine.

I FURTHER CERTIFY that Mark Davis is the duly elected President and Chief Executive Officer of Chemtrade and holds such offices on the date hereof, that Mr. Davis, in his capacity as President and Chief Executive Officer is authorized to represent and bind Chemtrade in all matters including, but not limited to, contracts and that set forth below is the genuine signature of such officer:

Mark Davis
President and Chief Executive Officer

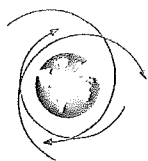
IN WITNESS WHEREOF, I have hereunto set my hand and have caused the seal of the Company to be affixed effective this 31st day of January, 2016.

Susan Paré
Corporate Secretary

Seal

Exhibit "A"

90 East Halsey Road
Parsippany, NJ 07054
Tel: 800-441-2659



CHEMTRADE

WATER TREATMENT GROUP

90 EAST HALSEY ROAD,
PARSIPPANY, NJ 07054
TEL: (973) 515-0500
FAX: (973) 515-4461

LIQUID ALUMINUM SULFATE

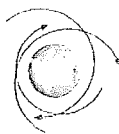
Chemtrade Chemicals certifies that all grades of Aluminum Sulfate as produced by our manufacturing locations will meet National Sanitation Foundation Standard 60 and ANSI/AWWA B 403-09 standard in every respect.

Material Safety Data Sheet, NSF Certification and related technical information is attached for review.

Elizabeth Ryno
Marketing Specialist

T

Exhibit "A"



CHEMTRADE

<http://www.chemtradelogistics.com>

Liquid Alum PRODUCT DATA SHEET

CHARACTERISTICS

Liquid Alum is a clear, light green, slight yellow, brown, amber or orange-like tinted solution. It is a cationic inorganic coagulant and flocculant suitable for industrial and municipal water and wastewater treatment applications.

NSF/ANSI Standard 60: Drinking Water Chemicals - Health Effects; Certified

TYPICAL PROPERTIES

Formula:	Aqueous solution of aluminum sulfate		
C.A.S.	10043-01-3 (Aluminum sulfate)		
	pH (neat)	1.4 - 2.6	
	Specific Gravity @ 21°C (70°F)	1.30 - 1.35	
	Freezing Point	-16°C (4°F)	
	Density, lbs./gal., US	10.8 - 11.3	
	Aluminum as Al, %	4.2 - 4.5	
	Aluminum as Al ₂ O ₃ , %	8.0 - 8.4	
	Aluminum as Al ₂ (SO ₄) ₃ •14H ₂ O (Dry Alum), %	46 - 49	

PRODUCT USES

Municipal and industrial water and wastewater treatment for the removal of turbidity, color, suspended solids and phosphorus. Sludge compaction and volume reduction. Lagoon treatment. Oily wastewater clarification and dissolved air flotation. Emulsion breaking. Fixing rosin sizes on paper fibers. Paper machine drainage and retention aid. Paper machine pitch control.

SHIPPING CONTAINERS

Bulk transport	Bulk car	275 US gal. one way container	55 US gal. plastic drum
----------------	----------	-------------------------------	-------------------------

SHIPPING REGULATIONS (US DOT / TDG)

Proper Shipping Name: Corrosive Liquid, Acidic, Inorganic, N.O.S. (Contains Aluminum Sulfate)

Hazard Class: 8

ID Number: UN3264

Packing Group: III

The US EPA reportable quantity (RQ) for aluminum sulfate is 5,000 lbs.

PRODUCT SAFETY INFORMATION

Causes serious eye damage. Do not breathe vapors, mist or spray. Wash hands, forearms, and other exposed areas thoroughly after handling. Wear eye protection, protective clothing, and protective gloves. Anyone procuring, using or disposing of these products or their containers must be familiar with the appropriate safety and handling precautions. Such information may be found in the **Safety Data Sheets (SDS)** for these products or you may contact Chemtrade at 416-496-5856. In the event of an emergency with these products, call the 24 hour **Emergency Number: USA (CHEMTREC) 800-424-9300 or Canada (CANUTEC) 613-996-6666**. For additional information contact:

Syracuse Technical Center
315-478-2323 or 800-255-7589

Water Treatment Chemicals
Customer Service 844-204-9675

CHE-5001P-1

Revision Date: October 27, 2015

All information, statements, data, advice and/or recommendations, including, without limitation, those relating to storage, loading/unloading, piping and transportation (collectively referred to herein as "information") are believed to be accurate and reliable. However, no representation or warranty, expressed or implied, is made as to its completeness, accuracy, fitness for a particular purpose or any other matter, including, without limitation, that the practice or application of any such information is free of patent infringement or other intellectual property misappropriation. Chemtrade Logistics Inc. and its affiliates (collectively, "Chemtrade") are not engaged in the business of providing technical, operational, engineering, safety, or financial advice, and, therefore, any such information provided herein has been furnished as an accommodation and without charge. All information provided herein is intended for use by persons having requisite knowledge, skill and experience in the chemical industry. Chemtrade 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 sole judgment and discretion, of such persons, their employees, advisors and agents.



Liquid Alum

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision Date: 08/09/16

Date of Issue: 05/01/15

Version: 1.4

SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Mixture

Product Name: Liquid Alum

Alternate Name: Aluminum Sulfate, Liquid

Formula: $\text{Al}_2(\text{SO}_4)_3 \cdot 14 \text{H}_2\text{O}$ (Dry Equivalent)

Intended Use of the Product

Alum is used as a coagulating agent in municipal and industrial water and wastewater treatment and as an additive in papermaking.

Name, Address, and Telephone of the Responsible Party

Manufacturer

CHEMTRADE LOGISTICS INC.

155 Gordon Baker Road

Suite 300

Toronto, Ontario M2H 3N5

For SDS Info: (416) 496-5856

www.chemtradelogistics.com

Emergency Telephone Number

Emergency Number :

Canada: CANUTEC +1-613-996-6666 / US: CHEMTREC +1-800-424-9300

Chemtrade Emergency Contact: (866) 416-4404

For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, call CHEMTREC – Day or Night

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification (GHS-US)

Met. Corr. 1 H290

Skin Corr. 1A H314

Eye Dam. 1 H318

Aquatic Acute 3 H402

Full text of H-phrases: see section 16

Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US) :



Signal Word (GHS-US) :

Danger

Hazard Statements (GHS-US) :

H290 - May be corrosive to metals

H314 - Causes severe skin burns and eye damage

H318 - Causes serious eye damage

H402 - Harmful to aquatic life

Precautionary Statements (GHS-US) :

P234 - Keep only in original container.

P260 - Do not breathe vapors, mist, or spray.

P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.

P273 - Avoid release to the environment.

P280 - Wear eye protection, protective clothing, protective gloves.

P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting.

P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

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contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a doctor.
P321 - Specific treatment (see section 4 on this SDS).
P363 - Wash contaminated clothing before reuse.
P390 - Absorb spillage to prevent material damage.
P405 - Store locked up.
P406 - Store in corrosive resistant container with a resistant inner liner.
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

Other Hazards

Other Hazards Not Contributing to the Classification: Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

Unknown Acute Toxicity (GHS-US) Not available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Name	Product identifier	% (w/w)	Classification (GHS-US)
Water	(CAS No) 7732-18-5	30 - 60	Not classified
Sulfuric acid, aluminum salt (3:2)	(CAS No) 10043-01-3	30 - 60	Met. Corr. 1, H290 Eye Dam. 1, H318 Aquatic Acute 3, H402

*As $\text{Al}_2(\text{SO}_4)_3 \cdot 14 \text{H}_2\text{O}$ (Dry Aluminum Sulfate).

The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret [29 CFR 1910.1200]. A range of concentration as prescribed by the Controlled Products Regulations has been used where necessary, due to varying composition.

Full text of H-phrases: see section 16

SECTION 4: FIRST-AID MEASURES

Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

Inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

Skin Contact: Rinse immediately with plenty of water. Obtain medical attention if irritation develops or persists.

Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

Ingestion: Do NOT induce vomiting. Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

Most Important Symptoms and Effects Both Acute and Delayed

General: Causes severe skin burns and eye damage.

Inhalation: May cause respiratory irritation.

Skin Contact: Redness. Pain. Serious skin burns. Blisters.

Eye Contact: Redness. Pain. Blurred vision. Severe burns. Causes permanent damage to the cornea, iris, or conjunctiva.

Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: None expected under normal conditions of use.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not considered flammable but may burn at high temperatures.

Explosion Hazard: Product is not explosive.

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Reactivity: Hazardous reactions will not occur under normal conditions. Liquid alum may react with some metals, to give flammable, potentially explosive hydrogen gas. Hydrogen gas can accumulate to explosive concentrations inside confined spaces.

Advice for Firefighters

Precautionary Measures Fire: Not available

Firefighting Instructions: Use water spray or fog for cooling exposed containers. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Forms aluminum oxide, sulfur dioxide and/or sulfur trioxide at temperatures above 760°C (1400°F) or when dry alum is encompassed in a fire involving other burning materials.

Other Information: Refer to Section 9 for flammability properties.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid all contact with skin, eyes, or clothing. Avoid breathing (dust, vapor, mist, gas).

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Stop leak if safe to do so. Eliminate ignition sources. Ventilate area.

Environmental Precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Collect spillage. Dispose in a safe manner in accordance with local/national regulations.

Reference to Other Sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Use good housekeeping practices during storage, transfer, handling, to avoid excessive dust accumulation. Protect from moisture.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

Incompatible Materials: Strong bases.

Special Rules on Packaging: Store in original container or corrosive resistant and/or lined container.

Specific End Use(s)

For professional use only.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

Exposure Controls

Appropriate Engineering Controls: Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.

Personal Protective Equipment: Protective goggles. Gloves. Protective clothing.

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Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear chemically resistant protective gloves.

Eye Protection: Chemical goggles or safety glasses.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: Use NIOSH-approved dust mask if dust has the potential to become airborne.

Environmental Exposure Controls: Do not allow the product to be released into the environment.

Consumer Exposure Controls: Do not eat, drink or smoke during use

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Clear, light green, slight yellow, brow, amber, or orange like tint
Odor	: Odorless
Odor Threshold	: Not available
pH	: 1.4 - 2.6
Melting Point	: Not applicable
Freezing Point	: -15.56 °C (4°F)
Boiling Point	: 101 °C (213.80 °F)
Flash Point	: Not flammable
Auto-ignition Temperature	: Not available
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not applicable
Lower Flammable Limit	: Not available
Upper Flammable Limit	: Not available
Vapor Pressure	: Not available
Relative Vapor Density at 20 °C	: Not available
Relative Density	: Not available
Specific Gravity	: 1.30 - 1.35
Solubility	: Water: Completely miscible in water.
Partition Coefficient: N-Octanol/Water	: Not available
Viscosity	: Not available
Explosion Data – Sensitivity to Mechanical Impact	: Not expected to present an explosion hazard due to mechanical impact.
Explosion Data – Sensitivity to Static Discharge	: Not expected to present an explosion hazard due to static discharge.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Hazardous reactions will not occur under normal conditions. Liquid alum may react with some metals, to give flammable, potentially explosive hydrogen gas. Hydrogen gas can accumulate to explosive concentrations inside confined spaces.

Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Direct sunlight. Extremely high or low temperatures. Ignition sources. Incompatible materials. Moisture.

Incompatible Materials: Strong bases. Metals.

Hazardous Decomposition Products: Oxides of aluminum. The decomposition products are corrosive and hazardous to health.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity: Not classified

LD50 and LC50 Data: Not available

Skin Corrosion/Irritation: Causes severe skin burns and eye damage.

pH: 1.4 - 2.6

Serious Eye Damage/Irritation: Causes serious eye damage.

pH: 1.4 - 2.6

Respiratory or Skin Sensitization: Not classified

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Germ Cell Mutagenicity: Not classified

Teratogenicity: Not available

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: May cause respiratory irritation.

Symptoms/Injuries After Skin Contact: Redness. Pain. Serious skin burns. Blisters.

Symptoms/Injuries After Eye Contact: Redness. Pain. Blurred vision. Severe burns. Causes permanent damage to the cornea, iris, or conjunctiva.

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: None expected under normal conditions of use.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Water (7732-18-5)	
LD50 Oral Rat	> 90000 mg/kg

SECTION 12: ECOLOGICAL INFORMATION

Toxicity Not classified

Persistence and Degradability Not available

Bioaccumulative Potential Not available

Mobility in Soil Not available

Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, and international regulations.

Ecology – Waste Materials: Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

14.1 In Accordance with DOT

Proper Shipping Name : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS ALUMINUM SULFATE)

Hazard Class : 8

Identification Number : UN3264

Label Codes : 8

Packing Group : III

ERG Number : 154



14.2 In Accordance with IMDG

Proper Shipping Name : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS ALUMINUM SULFATE)

Hazard Class : 8

Identification Number : UN3264

Packing Group : III

Label Codes : 8

EmS-No. (Fire) : F-A

EmS-No. (Spillage) : S-B



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14.3 In Accordance with IATA

Proper Shipping Name : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS ALUMINUM SULFATE)
Packing Group : III
Identification Number : UN3264
Hazard Class : 8
Label Codes : 8
ERG Code (IATA) : 8L



14.4 In Accordance with TDG

Proper Shipping Name : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS ALUMINUM SULFATE)
Packing Group : III
Hazard Class : 8
Identification Number : UN3264
Label Codes : 8



SECTION 15: REGULATORY INFORMATION



US Federal Regulations

Liquid Alum	
Clean Water Act	
Ingredient Name	Reportable Quantities
Aluminum sulfate (10043-01-3)	5000 lb (2270 kg)
Liquid Alum	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
Water (7732-18-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Sulfuric acid, aluminum salt (3:2) (10043-01-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

US State Regulations

Liquid Alum
Sulfuric acid, aluminum salt (3:2) (10043-01-3)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) List

Canadian Regulations

Liquid Alum	
WHMIS Classification	Class D Division 2 Subdivision B - Toxic material causing other toxic effects Class E - Corrosive Material
 	
Water (7732-18-5)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
Sulfuric acid, aluminum salt (3:2) (10043-01-3)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class E - Corrosive Material

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

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date : 08/09/16
Revision Summary : Section 1
Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Met. Corr. 1	Corrosive to metals Category 1
Skin Corr. 1A	Skin corrosion/irritation Category 1A
H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H402	Harmful to aquatic life

Party Responsible for the Preparation of This Document

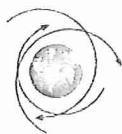
CHEMTRADE LOGISTICS, INC.

For SDS Info: (416) 496-5856

Handle product with due care and avoid unnecessary contact. This information is supplied under U.S. OSHA'S "Right to Know" (29 CFR 1910.1200) and Canada's WHMIS regulations. Although certain hazards are described herein, we cannot guarantee these are the only hazards that exist. The information contained herein is based on data available to us and is believed to be true and accurate but it is not offered as a product specification. No warranty, expressed or implied, regarding the accuracy of this data, the hazards connected with the use of the product, or the results to be obtained from the use thereof, is made and Chemtrade and its affiliates assume no responsibility. Chemtrade is a member of the CIAC (Chemistry Industry Association of Canada) and adheres to the codes and principles of Responsible Care™.



Chemtrade North America SDS Template



CHEMTRADE

<http://www.chemtradelogistics.com>

Liquid Ammonium Sulfate PRODUCT DATA SHEET

CHARACTERISTICS

Liquid Ammonium Sulfate is an odorless, clear, faint yellow to amber colored liquid. It is an advanced inorganic product suitable for industrial and municipal water and wastewater treatment applications.

NSF/ANSI Standard 60: Drinking Water Chemicals - Health Effects; Certified

TYPICAL PROPERTIES

Formula:	Aqueous solution of ammonium sulfate		
C.A.S.	7783-20-2 (Ammonium sulfate)		
	pH (neat)	3.0 - 5.0	
	Specific Gravity @ 21°C (70°F)	1.216 - 1.228	
	Freezing Point	Less than -12°C (10°F)	
	Density, lbs./gal., US	10.15 - 10.25	
	(NH ₄) ₂ SO ₄ , %	38 - 40	
	NH ₃ Equivalent, %	9.8 - 10.3	

PRODUCT USES

Municipal and industrial water and wastewater treatment for disinfection as a source of ammonia in chloramination. Disinfection byproduct control.

SHIPPING CONTAINERS

Bulk transport	Bulk car	275 US gal. one way container	55 US gal. plastic drum
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SHIPPING REGULATIONS (US DOT / TDG)

Classification: Not regulated for transport

RQ: Not applicable

PRODUCT SAFETY INFORMATION

Anyone procuring, using or disposing of these products or their containers must be familiar with the appropriate safety and handling precautions. Such information may be found in the **Safety Data Sheets (SDS)** for these products or you may contact Chemtrade at 416-496-5856. In the event of an emergency with these products, call the 24 hour **Emergency Number: USA (CHEMTREC) 800-424-9300** or **Canada (CANUTEC) 613-996-6666**. For additional information contact:

Syracuse Technical Center
315-478-2323 or 800-255-7589

Water Treatment Chemicals
Customer Service 844-204-9675

CHE-5040P

Revision Date: July 17, 2015

All information, statements, data, advice and/or recommendations, including, without limitation, those relating to storage, loading/unloading, piping and transportation (collectively referred to herein as "information") are believed to be accurate and reliable. However, no representation or warranty, express or implied, is made as to its completeness, accuracy, fitness for a particular purpose or any other matter, including, without limitation, that the practice or application of any such information is free of patent infringement or other intellectual property misappropriation. Chemtrade Logistics Inc. and its affiliates (collectively, "Chemtrade") are not engaged in the business of providing technical, operational, engineering or safety information for a fee, and, therefore, any such information provided herein has been furnished as an accommodation and without charge. All information provided herein is intended for use by persons having requisite knowledge, skill and experience in the chemical industry. Chemtrade 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 sole judgment and discretion, of such persons, their employees, advisors and agents.



Liquid Ammonium Sulfate

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Revision Date: 05/01/15 Date of Issue: 05/01/15

Version: 1.0

SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Mixture

Product Name: Liquid Ammonium Sulfate

Intended Use of the Product

Municipal and industrial water and wastewater treatment for disinfection as a source of ammonia in chloramination. Disinfection byproduct control.

Name, Address, and Telephone of the Responsible Party

Manufacturer

CHEMTRADE LOGISTICS INC.

155 Gordon Baker Road

Suite 300

Toronto, Ontario M2H 3N5

For SDS Info: (416) 496-5856

www.chemtradelogistics.com

Emergency Telephone Number

Emergency number :

Canada: CANUTEC +1-613-996-6666 / US: CHEMTREC +1-800-424-9300

Chemtrade Emergency Contact: (866) 416-4404

For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, call CHEMTREC – Day or Night

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification (GHS-US)

Aquatic Acute 2 H401

Label Elements

GHS-US Labeling

Signal Word (GHS-US) : No labeling applicable

Hazard Statements (GHS-US) : H401 - Toxic to aquatic life

Precautionary Statements (GHS-US) : P273 - Avoid release to the environment
P501 - Dispose of contents/container according to local, regional, territorial, provincial, national, and international regulations.

Other Hazards

Other Hazards Not Contributing to the Classification: Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

Unknown Acute Toxicity (GHS-US) Not available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Name	Product identifier	% (w/w)	Classification (GHS-US)
Ammonium sulfate	(CAS No) 7783-20-2	38 - 40	Aquatic Acute 2, H401
Citric acid	(CAS No) 77-92-9	0.04	Comb. Dust Eye Irrit. 2A, H319

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

Inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

Skin Contact: Rinse immediately with plenty of water. Obtain medical attention if irritation develops or persists.

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Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

Ingestion: Do NOT induce vomiting. Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

Most Important Symptoms and Effects Both Acute and Delayed

General: Not expected to present a significant hazard under anticipated conditions of normal use.

Inhalation: May cause respiratory irritation. Inhalation of decomposition products may cause pulmonary edema. Symptoms of respiratory complications may occur several hours after.

Skin Contact: May cause skin irritation.

Eye Contact: May cause eye irritation.

Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: None expected under normal conditions of use.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not flammable.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Ammonia.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid all contact with skin, eyes, or clothing. Avoid breathing vapor, mist, or spray.

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area.

Environmental Precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clear up spills immediately and dispose of waste safely. Spills should be contained with mechanical barriers. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

Reference to Other Sections

See Heading 8. Exposure controls and personal protection. Concerning disposal elimination after cleaning, see item 13.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Exhibit "A"

Liquid Ammonium Sulfate

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

Incompatible Materials: Strong acids. Strong bases. Strong oxidizers. Chlorates. Nitrates. Nitrites.

Specific End Use(s)

Municipal and industrial water and wastewater treatment for disinfection as a source of ammonia in chloramination. Disinfection byproduct control.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

No Occupational Exposure Limits (OELs) have been established for this product or its chemical components.

Exposure Controls

Appropriate Engineering Controls: Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.

Personal Protective Equipment: Protective goggles. Gloves. Protective clothing. Insufficient ventilation: wear respiratory protection.

Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear chemically resistant protective gloves.

Eye Protection: Chemical goggles or safety glasses.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, NIOSH-approved respiratory protection should be worn.

Environmental Exposure Controls: Do not allow the product to be released into the environment.

Consumer Exposure Controls: Do not eat, drink or smoke during use

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Clear, faint yellow to amber colored
Odor	: Odorless
Odor Threshold	: Not available
pH	: 3 - 5
Relative Evaporation Rate (butylacetate=1)	: Not available
Melting Point	: Not applicable
Freezing Point	: -12 °C (10.4 °F)
Boiling Point	: Not available
Flash Point	: Not applicable
Auto-ignition Temperature	: Not applicable
Decomposition Temperature	: Ammonium sulfate: 235 °C (455 °F)
Flammability (solid, gas)	: Not applicable
Lower Flammable Limit	: Not applicable
Upper Flammable Limit	: Not applicable
Vapor Pressure	: Not available
Relative Vapor Density at 20 °C	: Not available
Specific Gravity	: 1.216 - 1.228
Solubility	: Not available
Partition coefficient: n-octanol/water	: Not available
Viscosity	: Not available
Explosion Data – Sensitivity to Mechanical Impact	: Not expected to present an explosion hazard due to mechanical impact.
Explosion Data – Sensitivity to Static Discharge	: Not expected to present an explosion hazard due to static discharge.

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SECTION 10: STABILITY AND REACTIVITY

Reactivity: Hazardous reactions will not occur under normal conditions.

Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Direct sunlight. Extremely high or low temperatures. Ignition sources. Incompatible materials.

Incompatible Materials: Strong acids, strong bases, strong oxidizers. Chlorates. Nitrates. Nitrites.

Hazardous Decomposition Products: Ammonia. Sulfur oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity: Not classified

LD50 and LC50 Data: Not available

Skin Corrosion/Irritation: Not classified (pH: 3 - 5)

Serious Eye Damage/Irritation: Not classified (pH: 3 - 5)

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not available

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: May cause respiratory irritation. Inhalation of decomposition products may cause pulmonary edema. Symptoms of respiratory complications may occur several hours after.

Symptoms/Injuries After Skin Contact: May cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause eye irritation.

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: None expected under normal conditions of use.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Ammonium sulfate (7783-20-2)	
LD50 Oral Rat	> 2000 mg/kg
Citric acid (77-92-9)	
LD50 Oral Rat	5400 mg/kg
LD50 Dermal Rat	> 2000 mg/kg

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Ecology - General: This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

Ecology - Water: Toxic to aquatic life.

Ammonium sulfate (7783-20-2)	
LC50 Fish 1	5.2 (5.2 - 8.2) mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 Daphnia 1	14 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC 50 Fish 2	32.2 (32.2 - 41.9) mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])

Citric acid (77-92-9)	
LC50 Fish 1	1516 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

Persistence and Degradability

Citric acid (77-92-9)	
Persistence and Degradability	Readily biodegradable in water.

Liquid Ammonium Sulfate

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Bioaccumulative Potential

Ammonium sulfate (7783-20-2)	
Log Pow	-5.1 (at 25 °C)
Citric acid (77-92-9)	
Log Pow	-1.72 (at 20 °C)

Mobility in Soil

Not available

Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, and international regulations.

Ecology – Waste Materials: Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

14.1 In Accordance with DOT Not regulated for transport

14.2 In Accordance with IMDG Not regulated for transport

14.3 In Accordance with IATA Not regulated for transport

14.4 In Accordance with TDG Not regulated for transport

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

Ammonium sulfate (7783-20-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Citric acid (77-92-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

US State Regulations

Ammonium sulfate (7783-20-2)	
U.S. - Massachusetts - Right To Know List	
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List	
U.S. - Pennsylvania - RTK (Right to Know) List	

Canadian Regulations

Liquid Ammonium Sulfate	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
Ammonium sulfate (7783-20-2)	
Listed on the Canadian DSL (Domestic Substances List)	
Listed on the Canadian IDL (Ingredient Disclosure List)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
Citric acid (77-92-9)	
Listed on the Canadian DSL (Domestic Substances List)	
Listed on the Canadian IDL (Ingredient Disclosure List)	
WHMIS Classification	Class D Division 2 Subdivision B - Toxic material causing other toxic effects

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

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision date : 05/01/15

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Aquatic Acute 2	Hazardous to the aquatic environment - Acute Hazard Category 2
-----------------	--

Liquid Ammonium Sulfate

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Comb. Dust	Combustible Dust
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
H232	May form combustible dust concentrations in air
H319	Causes serious eye irritation
H401	Toxic to aquatic life

Party Responsible for the Preparation of This Document

CHEMTRADE LOGISTICS, INC.

For SDS Info: (416) 496-5856

Handle product with due care and avoid unnecessary contact. This information is supplied under U.S. OSHA'S "Right to Know" (29 CFR 1910.1200) and Canada's WHMIS regulations. Although certain hazards are described herein, we cannot guarantee these are the only hazards that exist. The information contained herein is based on data available to us and is believed to be true and accurate but it is not offered as a product specification. No warranty, expressed or implied, regarding the accuracy of this data, the hazards connected with the use of the product, or the results to be obtained from the use thereof, is made and Chemtrade and its affiliates assume no responsibility. Chemtrade is a member of the CIAC (Chemistry Industry Association of Canada) and adheres to the codes and principles of Responsible Care™.



Chemtrade North America SDS Template



Water Chemicals Group

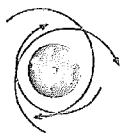
90 East Halsey Road
Parsippany, NJ 07054
Tel: 973-515-0900
Fax: 973-515-4461

PRODUCTS CERTIFICATION

This is to certify that the all grades of Clar+Ion as produced by Chemtrade Chemicals US LLC's meet NSF/ANSI 60 and AWWA Standard B-403-09 in every respect. Product bid will also meet or exceed the specifications as set forth by the City of Round Rock chemical bid opening September 8, 2016.

Please find attached related MSDS and NSF Certification.

Elizabeth Ryno
Marketing Specialist

**CHEMTRADE**<http://www.chemtradelogistics.com>

For Product Information:

<http://www.generalchemical.com/products/>**Clar+Ion® CS8****PRODUCT DATA SHEET****CHARACTERISTICS**

Clar+Ion® CS8 is a clear, blue-green colored liquid. It is an advanced cationic coagulant and flocculant suitable for industrial and municipal water and wastewater treatment applications.

NSF/ANSI Standard 60: Drinking Water Chemicals - Health Effects; Certified**TYPICAL PROPERTIES**

Formula:	Aluminum sulfate mixture
C.A.S.	10043-01-3 / 7758-98-7 (Aluminum sulfate / Cupric sulfate)
	pH (neat) 2.4 - 2.7
	Specific Gravity @ 70°F (21°C) 1.29 - 1.32
	Freezing Point (approx.) 3°F (-16°C)
	Density, lbs/gal., U.S. 10.7 - 11.0
	Aluminum as Al, % 3.9 - 4.1
	Aluminum as Al ₂ O ₃ , % 7.3 - 7.7
	Copper (II) Sulfate Pentahydrate, % 1.9 - 2.1
	Soluble Cupric Iron (Cu ⁺²), % 0.48 - 0.53

PRODUCT USES

Municipal and industrial water and wastewater treatment for the removal of turbidity, color, suspended solids and phosphorus. Sludge compaction and volume reduction. Lagoon treatment. Oily wastewater clarification and dissolved air flotation. Emulsion breaking. Algaecide.

SHIPPING CONTAINERS

Bulk transport
275 gal. one way container

Bulk car
55 gal. plastic drum

SHIPPING REGULATIONS

DOT Classification:

Corrosive Liquid, Acidic, Inorganic, N.O.S. (Contains Aluminum Sulfate and Cupric Sulfate)

Hazard Class: 8

DOT ID Number: UN 3264

Packing Group: III

Copper Sulfate: RQ = 10 Lbs. (CASRN formula basis)

PRODUCT SAFETY INFORMATION

Clar+Ion® CS8 can irritate the skin and eyes. May be harmful if swallowed. Avoid contact with skin, eyes and clothing. Anyone procuring, using or disposing of these products or their containers must be familiar with the appropriate safety and handling precautions. Such information may be found in the **Material Safety Data Sheets (MSDS)** for these products or you may contact Chemtrade Technical Service. In the event of an emergency with these products, call the 24 hour **Emergency Number: USA (CHEMTREC) 800-424-9300** or **Canada (CANUTEC) 613-996-6666**. For additional information contact:

Syracuse Technical Center
(315) 478-2323
(800) 255-7589 Outside NY

Water Treatment Chemicals
(973) 515-0900
(800) 631-8050 Customer Service

Revision Date: April 16, 2014

All information, statements, data, advice and/or recommendations, including, without limitation, those relating to storage, loading/unloading, piping and transportation (collectively referred to herein as "information") are believed to be accurate and reliable. However, no representation or warranty, express or implied, is made as to its completeness, accuracy, fitness for a particular purpose or any other matter, including, without limitation, that the practice or application of any such information is free of patent infringement or other intellectual property misappropriation. Chemtrade Logistics Inc. and its affiliates (collectively, "Chemtrade") are not engaged in the business of providing technical, operational, engineering, safety, training, and, therefore, any such information provided herein has been furnished as an accommodation and without charge. All information provided herein is intended for use by persons having requisite knowledge, skill and experience in the chemical industry. Chemtrade 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 sole judgment and discretion, of such persons, their employees, advisors and agents.



Clar-Ion® CS8

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Revision Date: 05/01/15 Date of Issue: 05/01/15

Version: 1.0

SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Mixture

Product Name: Clar-Ion® CS8

Intended Use of the Product

Use of the Substance/Mixture: Municipal and industrial water and wastewater treatment for the removal of turbidity, color, suspended solids and phosphorus. Sludge compaction and volume reduction. Lagoon treatment. Oily wastewater clarification and dissolved air flotation. Emulsion breaking. For professional use only.

Name, Address, and Telephone of the Responsible Party

Manufacturer

CHEMTRADE LOGISTICS INC.

155 Gordon Baker Road

Suite 300

Toronto, Ontario M2H 3N5

For SDS Info: (416) 496-5856

www.chemtradelogistics.com

Emergency Telephone Number

Emergency Number :

Canada: CANUTEC +1-613-996-6666 / US: CHEMTREC +1-800-424-9300

Chemtrade Emergency Contact: (866) 416-4404

For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, call CHEMTREC – Day or Night

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification (GHS-US)

Met. Corr. 1 H290

Eye Dam. 1 H318

Aquatic Acute 3 H402

Aquatic Chronic 3 H412

Full text of H-phrases: see section 16

Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US)

:



GHS05

Signal Word (GHS-US)

: Danger

Hazard Statements (GHS-US)

: H290 - May be corrosive to metals

H318 - Causes serious eye damage

H402 - Harmful to aquatic life

H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements (GHS-US)

: P234 - Keep only in original container.

P273 - Avoid release to the environment.

P280 - Wear protective gloves, protective clothing, face protection, eye protection.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 - Immediately call a poison center or doctor.

P390 - Absorb spillage to prevent material damage.

P406 - Store in corrosive resistant container with a resistant inner liner.

P501 - Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

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Other Hazards

Other Hazards Not Contributing to the Classification: Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

Unknown Acute Toxicity (GHS-US) Not available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Name	Product identifier	% (w/w)	Classification (GHS-US)
Water	(CAS No) 7732-18-5	40 - 70	Not classified
Aluminum Sulfate*	(CAS No) 10043-01-3	30 - 60	Met. Corr. 1, H290 Eye Dam. 1, H318 Aquatic Acute 3, H402
Sulfuric acid, copper(2+) salt (1:1), pentahydrate**	(CAS No) 7758-99-8	2	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

*As $\text{Al}_2(\text{SO}_4)_3 \bullet 14\text{H}_2\text{O}$ (Dry Aluminum Sulfate)

** Strong inorganic acid aerosols/mists containing this substance are carcinogenic to humans. However, under conditions of normal use this is not a potential route of exposure, and does not warrant a carcinogenicity classification for the mixture.

***The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret within the meaning of the OSHA Hazard Communication Standard [29 CFR 1910.1200].

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

Inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

Skin Contact: Remove contaminated clothing. Gently wash with plenty of soap and water followed by rinsing with water for at least 15 minutes. Call a POISON CENTER or doctor/physician if you feel unwell. Wash contaminated clothing before reuse.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 60 minutes. Immediately call a POISON CENTER or doctor/physician.

Ingestion: Do NOT induce vomiting. Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

Most Important Symptoms and Effects Both Acute and Delayed

General: Causes serious eye damage.

Inhalation: May cause respiratory irritation.

Skin Contact: May cause skin irritation.

Eye Contact: Causes serious eye damage.

Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: None expected under normal conditions of use.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not flammable.

Explosion Hazard: Product is not explosive.

Reactivity: Corrosive to metals.

Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

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Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Sulfur oxides.

Other Information: Refer to Section 9 for flammability properties.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Handle in accordance with good industrial hygiene and safety practice.

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Stop leak if safe to do so. Ventilate area.

Environmental Precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Spills should be contained with mechanical barriers. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

Reference to Other Sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Additional Hazards When Processed: Corrosive to metals upon prolonged contact.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store in original container or corrosive resistant and/or lined container.

Incompatible Materials: Strong acids. Strong bases. Strong oxidizers.

Specific End Use(s)

For professional use only. Municipal and industrial water and wastewater treatment for the removal of turbidity, color, suspended solids and phosphorus. Sludge compaction and volume reduction. Lagoon treatment. Oily wastewater clarification and dissolved air flotation. Emulsion breaking.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

Copper compounds (RR-00595-8)		
USA ACGIH	ACGIH TWA (mg/m ³)	1 mg/m ³ (dust and mist)
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	1 mg/m ³ (dust and mist)
USA IDLH	US IDLH (mg/m ³)	100 mg/m ³ (dust and mist)
Manitoba	OEL TWA (mg/m ³)	1 mg/m ³ (dust and mist)
Newfoundland & Labrador	OEL TWA (mg/m ³)	1 mg/m ³ (dust and mist)
Nova Scotia	OEL TWA (mg/m ³)	1 mg/m ³ (dust and mist)
Prince Edward Island	OEL TWA (mg/m ³)	1 mg/m ³ (dust and mist)

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Exposure Controls

Appropriate Engineering Controls: Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.

Personal Protective Equipment: Protective goggles. Gloves. Protective clothing. Insufficient ventilation: wear respiratory protection.

Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear chemically resistant protective gloves.

Eye Protection: Chemical safety goggles.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment.

Environmental Exposure Controls: Do not allow the product to be released into the environment.

Consumer Exposure Controls: Do not eat, drink or smoke during use

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Clear, blue
Odor	: Not available
Odor Threshold	: Not available
pH	: 2.4 - 2.7
Melting Point	: Not available
Freezing Point	: -16 °C (3.2 °F)
Boiling Point	: Not available
Flash Point	: Not flammable
Auto-ignition Temperature	: Not applicable
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not applicable
Lower Flammable Limit	: Not applicable
Upper Flammable Limit	: Not applicable
Vapor Pressure	: Not available
Relative Vapor Density at 20 °C	: Not available
Relative Density	: Not available
Specific Gravity	: 1.29 - 1.32
Solubility	: 100% in water
Partition Coefficient: N-Octanol/Water	: Not available
Viscosity	: Not available
Explosion Data – Sensitivity to Mechanical Impact	: Not expected to present an explosion hazard due to mechanical impact.
Explosion Data – Sensitivity to Static Discharge	: Not expected to present an explosion hazard due to static discharge.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Corrosive to metals.

Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Direct sunlight. Extremely high or low temperatures. Incompatible materials.

Incompatible Materials: Strong acids. Strong bases. Strong oxidizers. Metals.

Hazardous Decomposition Products: Oxides of aluminum. Oxides of copper. Sulphur oxides. Hydrochloric acid fumes may be generated.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity: Not classified

LD50 and LC50 Data: Not available

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Skin Corrosion/Irritation: Not classified

pH: 2.4 - 2.7

Serious Eye Damage/Irritation: Causes serious eye damage.

pH: 2.4 - 2.7

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not classified

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: May cause respiratory irritation.

Symptoms/Injuries After Skin Contact: May cause skin irritation.

Symptoms/Injuries After Eye Contact: Causes serious eye damage.

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: None expected under normal conditions of use.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Sulfuric acid, copper(2+) salt (1:1), pentahydrate (7758-99-8)	
LD50 Dermal Rat	> 2 g/kg

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Ecology - General: Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

Sulfuric acid, copper(2+) salt (1:1), pentahydrate (7758-99-8)	
LC50 Fish 1	0.66 - 1.15 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [semi-static])
EC50 Daphnia 1	0.147 - 0.227 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC 50 Fish 2	0.96 - 1.8 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

Persistence and Degradability Not available

Bioaccumulative Potential Not available

Mobility in Soil Not available

Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

Ecology - Waste Materials: Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

14.1 In Accordance with DOT

Proper Shipping Name : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS ALUMINUM SULFATE)
Hazard Class : 8
Identification Number : UN3264
Label Codes : 8
Packing Group : III
ERG Number : 154



14.2 In Accordance with IMDG

Proper Shipping Name : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS ALUMINUM SULFATE)
Hazard Class : 8
Identification Number : UN3264

Clar+Ion® CS8

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According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Packing Group : III
Label Codes : 8
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-B



14.3 In Accordance with IATA

Proper Shipping Name : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS ALUMINUM SULFATE)
Packing Group : III
Identification Number : UN3264
Hazard Class : 8
Label Codes : 8
ERG Code (IATA) : 8L



14.4 In Accordance with TDG

Proper Shipping Name : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS ALUMINUM SULFATE)
Packing Group : III
Hazard Class : 8
Identification Number : UN3264
Label Codes : 8



SECTION 15: REGULATORY INFORMATION

US Federal Regulations

Clar+Ion® CS8	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
Water (7732-18-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Copper compounds (RR-00595-8)	
Listed on United States SARA Section 313	
SARA Section 313 - Emission Reporting	1.0 % (This category does not include CAS numbers 147-14-8, 1328-53-6, or 14302-13-7, or copper phthalocyanine compounds that are substituted with only hydrogen and/or chlorine and/or bromine.)
Aluminum Sulfate (10043-01-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

US State Regulations

Clar+Ion® CS8()	
Not listed on US State Regulatory Lists	
Copper compounds (RR-00595-8)	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List	
U.S. - Pennsylvania - RTK (Right to Know) List	
Aluminum Sulfate (10043-01-3)	
U.S. - Massachusetts - Right To Know List	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List	
U.S. - Pennsylvania - RTK (Right to Know) List	

Exhibit "A"

Clar+Ion® CS8

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Federal Insecticide, Fungicide and Rodenticide Act

EPA Registration Number: 83918-5

This product is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION

CORROSIVE

Causes irreversible eye damage and skin burns.

Harmful if swallowed or absorbed through skin or inhaled.

Do not get in eyes, on skin or on clothing.

Avoid breathing vapour or spray mist.

Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.

Remove contaminated clothing and wash clothing before reuse.

Wash thoroughly with soap and water after handling.

Pesticide is toxic to fish and aquatic invertebrates and may contaminate water through runoff.

Do not contaminate water when disposing of equipment wash waters or rinsate.

Canadian Regulations

Clar+Ion® CS8

WHMIS Classification Class E - Corrosive Material



Sulfuric acid, copper(2+) salt (1:1), pentahydrate (7758-99-8)

WHMIS Classification Class D Division 2 Subdivision B - Toxic material causing other toxic effects

Water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification Uncontrolled product according to WHMIS classification criteria

Copper compounds (RR-00595-8)

Listed on the Canadian IDL (Ingredient Disclosure List)

IDL Concentration 1 %

Aluminum Sulfate (10043-01-3)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification Class E - Corrosive Material

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

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision date : 05/01/15

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A

Clar+Ion® CS8

Safety Data Sheet

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Met. Corr. 1	Corrosive to metals Category 1
Skin Irrit. 2	Skin corrosion/irritation Category 2
H290	May be corrosive to metals
H302	Harmful if swallowed
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H400	Very toxic to aquatic life
H402	Harmful to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

Party Responsible for the Preparation of This Document

CHEMTRADE LOGISTICS, INC.

For SDS Info: (416) 496-5856

Handle product with due care and avoid unnecessary contact. This information is supplied under U.S. OSHA'S "Right to Know" (29 CFR 1910.1200) and Canada's WHMIS regulations. Although certain hazards are described herein, we cannot guarantee these are the only hazards that exist. The information contained herein is based on data available to us and is believed to be true and accurate but it is not offered as a product specification. No warranty, expressed or implied, regarding the accuracy of this data, the hazards connected with the use of the product, or the results to be obtained from the use thereof, is made and Chemtrade and its affiliates assume no responsibility. Chemtrade is a member of the CIAC (Chemistry Industry Association of Canada) and adheres to the codes and principles of Responsible Care™.

Responsible Care®
Our commitment to sustainability.



Gestion responsable™
Notre engagement envers le développement durable.

Chemtrade North America SDS Template



Water Chemicals Group

90 East Halsey Road
Parsippany, NJ 07054
Tel: 973-515-0900
Fax: 973-515-4461

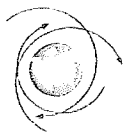
PRODUCTS CERTIFICATION

This is to certify that the all grades of Hyper+Ion as produced by Chemtrade Chemicals meet NSF/ANSI 60 and AWWA Standard B-408-10 in every respect. Product bid will also meet or exceed the specifications as set forth by the City of Round Rock bid opening September 8, 2016.

Please find attached related MSDS and NSF Certification.


Elizabeth Ryno
Marketing Specialist

Exhibit "A"



CHEMTRADE

<http://www.chemtradelogistics.com>

Hyper+lon® 1090

PRODUCT DATA SHEET

CHARACTERISTICS

Hyper+lon® 1090 is a colorless liquid. It is an advanced cationic coagulant and flocculant suitable for industrial and municipal water and wastewater treatment applications.

NSF/ANSI Standard 60: Drinking Water Chemicals - Health Effects; Certified

TYPICAL PROPERTIES

Formula:	Polyaluminum hydroxychloride solution
C.A.S.	1327-41-9 (Polyaluminum hydroxychloride)
pH (neat)	2.5 - 4.0
Specific Gravity @ 21°C (70°F)	1.30 - 1.36
Freezing Point (approx.)	-4°C (25°F)
Density, lbs./gal., US	10.8 - 11.3
Aluminum as Al, %	11.9 - 12.7
Aluminum as Al ₂ O ₃ , %	22.5 - 24.0
Basicity, %	80 (min.)

PRODUCT USES

Municipal and industrial water and wastewater treatment for the removal of turbidity, color, suspended solids and phosphorus. Sludge compaction and volume reduction. Lagoon treatment. Oily wastewater clarification and dissolved air flotation. Emulsion breaking. Paper machine pitch control.

SHIPPING CONTAINERS

Bulk transport	Bulk car	275 US gal. one way container	55 US gal. plastic drum
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SHIPPING REGULATIONS (US DOT / TDG)

Classification: Not regulated for transport

RQ: Not applicable

PRODUCT SAFETY INFORMATION

Causes serious eye irritation. Wash hands, forearms, and face thoroughly after handling. Wear eye protection, face protection, protective clothing, and protective gloves. Anyone procuring, using or disposing of these products or their containers must be familiar with the appropriate safety and handling precautions. Such information may be found in the **Safety Data Sheets (SDS)** for these products or you may contact Chemtrade at 416-496-5856. In the event of an emergency with these products, call the 24 hour **Emergency Number: USA (CHEMTREC) 800-424-9300 or Canada (CANUTEC) 613-996-6666**. For additional information contact:

Syracuse Technical Center
315-478-2323 or 800-255-7589

Water Treatment Chemicals
Customer Service 844-204-9675

CHE-6014P

Revision Date: July 17, 2015

All information, statements, data, advice and/or recommendations, including, without limitation, those relating to storage, loading/unloading, piping and transportation (collectively referred to herein as "information") are believed to be accurate and reliable. However, no representation or warranty, express or implied, is made as to its completeness, accuracy, fitness for a particular purpose or any other matter, including, without limitation, that the practice or application of any such information is free of patent infringement or other intellectual property misappropriation. Chemtrade Logistics Inc. and its affiliates (collectively, "Chemtrade") are not engaged in the business of providing technical, operational, engineering or safety information for sale, and, therefore, any such information provided herein has been furnished as an accommodation and without charge. All information provided herein is intended for use by persons having requisite knowledge, skill and experience in the chemical industry. Chemtrade 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 sole judgment and discretion, of such persons, their employees, advisors and agents.



Hyper+Ion® 1090

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Revision Date: 05/03/15 Date of Issue: 05/03/15

Version: 1.0

SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Mixture

Product Name: Hyper+Ion® 1090

Other Generic Name: Aluminum Chlorohydrate

Intended Use of the Product

Use of the Substance/Mixture: Municipal and industrial water and wastewater treatment for the removal of turbidity, color, suspended solids and phosphorus. Sludge compaction and volume reduction. Lagoon treatment. Oily wastewater clarification and dissolved air flotation. Emulsion breaking. Paper machine pitch control. Retention and drainage aid, pitch control, and neutral size bonding agent for paper machines operating in the pH range of 6.0 to 7.8. Point of application to the paper machine is critical in obtaining maximum benefit. This product may be used on fourdrinier and cylinder machines, as well as twin wire formers. It is effective for a variety of paper and board grades.

Name, Address, and Telephone of the Responsible Party

Manufacturer

CHEMTRADE LOGISTICS INC.

155 Gordon Baker Road

Suite 300

Toronto, Ontario M2H 3N5

For SDS Info: (416) 496-5856

www.chemtradelogistics.com

Emergency Telephone Number

Emergency Number :

Canada: CANUTEC +1-613-996-6666 / US: CHEMTREC +1-800-424-9300

Chemtrade Emergency Contact: (866) 416-4404

For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, call CHEMTREC – Day or Night

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification (GHS-US)

Eye Irrit. 2A H319

Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US)



GHS07

Signal Word (GHS-US)

: Warning

Hazard Statements (GHS-US)

: H319 - Causes serious eye irritation.

Precautionary Statements (GHS-US)

: P264 - Wash hands, forearms, and face thoroughly after handling.
P280 - Wear eye protection, face protection, protective clothing, protective gloves.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 - If eye irritation persists: Get medical advice/attention.

Other Hazards

Other Hazards Not Contributing to the Classification: Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

Unknown Acute Toxicity (GHS-US) Not available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Name	Product identifier	% (w/w)	Classification (GHS-US)
Water	(CAS No) 7732-18-5	40 - 70	Not classified

Date of Issue: 05/03/15

EN (English US)

SDS# CHE-60145

1/6

Exhibit "A"

Hyper+Ion® 1090

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Aluminum chloride, basic	(CAS No) 1327-41-9	40 - 70	Eye Dam. 1, H318
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Full text of H-phrases: see section 16

* The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret within the meaning of the OSHA Hazard Communication Standard [29 CFR 1910.1200].

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

Inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

Skin Contact: Remove contaminated clothing. Gently wash with plenty of soap and water followed by rinsing with water for at least 15 minutes. Call a POISON CENTER or doctor/physician if you feel unwell. Wash contaminated clothing before reuse.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 60 minutes. Immediately call a POISON CENTER or doctor/physician.

Ingestion: Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

Most Important Symptoms and Effects Both Acute and Delayed

General: Causes serious eye irritation. Causes skin irritation. May cause respiratory irritation.

Inhalation: May cause respiratory irritation.

Skin Contact: Causes skin irritation.

Eye Contact: Causes serious eye irritation.

Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: None expected under normal conditions of use.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not flammable.

Explosion Hazard: Product is not explosive.

Reactivity: Corrosive to metals. Contact with metals may evolve flammable hydrogen gas.

Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Oxides of aluminum.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid all contact with skin, eyes, or clothing. Avoid breathing (vapor, mist, spray).

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Stop leak if safe to do so. Ventilate area.

Environmental Precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

Hyper+Ion® 1090

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Methods and Material for Containment and Cleaning Up

For Containment: Collect spillage.

Methods for Cleaning Up: Absorb and/or contain spill with inert material, then place in suitable container.

Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection. Concerning disposal elimination after cleaning, see item 13.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Use good housekeeping practices during storage, transfer and handling.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

Incompatible Materials: Strong acids, strong bases, strong oxidizers. Non acid-proof metals. Galvanized surfaces.

Specific End Use(s)

Municipal and industrial water and wastewater treatment for the removal of turbidity, color, suspended solids and phosphorus. Sludge compaction and volume reduction. Lagoon treatment. Oily wastewater clarification and dissolved air flotation. Emulsion breaking. Paper machine pitch control. Retention and drainage aid, pitch control, and neutral size bonding agent for paper machines operating in the pH range of 6.0 to 7.8. Point of application to the paper machine is critical in obtaining maximum benefit. This product may be used on fourdrinier and cylinder machines, as well as twin wire formers. It is effective for a variety of paper and board grades.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

No Occupational Exposure Limits (OELs) have been established for this product or its chemical components.

Exposure Controls

Appropriate Engineering Controls: Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.

Personal Protective Equipment: Protective goggles. Gloves. Corrosionproof clothing.

Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear chemically resistant protective gloves. Wear protective gloves made from PVC, neoprene, nitrile, vinyl, or PVC/NBR.

Eye Protection: Chemical goggles or safety glasses.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: Use NIOSH-approved air-purifying or supplied-air respirator where airborne concentrations of vapor or mist are expected to exceed exposure limits.

Environmental Exposure Controls: Do not allow the product to be released into the environment.

Consumer Exposure Controls: Do not eat, drink or smoke during use

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Colorless
Odor	: Not available
Odor Threshold	: Not available
pH	: 2.5 - 4.4
Melting Point	: Not applicable
Freezing Point	: -4 °C (25 °F)
Boiling Point	: Not available
Flash Point	: Not flammable

Hyper+Ion® 1090

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Auto-ignition Temperature	: Not applicable
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not applicable
Lower Flammable Limit	: Not applicable
Upper Flammable Limit	: Not applicable
Vapor Pressure	: Not available
Relative Vapor Density at 20 °C	: Not available
Specific Gravity	: 1.30 - 1.36
Solubility	: 100%
Partition Coefficient: N-octanol/water	: Not available
Viscosity	: Not available
Explosion Data – Sensitivity to Mechanical Impact	: Not expected to present an explosion hazard due to mechanical impact.
Explosion Data – Sensitivity to Static Discharge	: Not expected to present an explosion hazard due to static discharge.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Corrosive to metals. Contact with metals may evolve flammable hydrogen gas.

Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Direct sunlight. Extremely high or low temperatures. Incompatible materials.

Incompatible Materials: Strong acids, strong bases, strong oxidizers. Non acid-proof metals. Galvanized surfaces.

Hazardous Decomposition Products: Hydrochloric acid fumes may be generated.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity: Not classified

LD50 and LC50 Data: Not available

Skin Corrosion/Irritation: Not classified

pH: 2.5 - 4.4

Serious Eye Damage/Irritation: Causes serious eye irritation.

pH: 2.5 - 4.4

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not classified

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: May cause respiratory irritation.

Symptoms/Injuries After Skin Contact: Causes skin irritation.

Symptoms/Injuries After Eye Contact: Causes serious eye damage.

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: None expected under normal conditions of use.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Aluminum chloride, basic (1327-41-9)	
LD50 Oral Rat	> 2000 mg/kg
LD50 Dermal Rat	> 2000 mg/kg
Water (7732-18-5)	
LD50 Oral Rat	> 90000 mg/kg

Hyper+lon® 1090

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 12: ECOLOGICAL INFORMATION

Toxicity Not classified

Persistence and Degradability Not available

Bioaccumulative Potential Not available

Mobility in Soil Not available

Other Adverse Effects Not available

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

Ecology – Waste Materials: Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

14.1 In Accordance with DOT Not regulated for transport

14.2 In Accordance with IMDG Not regulated for transport

14.3 In Accordance with IATA Not regulated for transport

14.4 In Accordance with TDG Not regulated for transport

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

Hyper+lon® 1090	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
Aluminum chloride, basic (1327-41-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Water (7732-18-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	Listed on the United States TSCA (Toxic Substances Control Act) inventory

US State Regulations

Neither this product nor its chemical components appear on any US state lists.

Canadian Regulations

Hyper+lon® 1090	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
Aluminum chloride, basic (1327-41-9)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class E - Corrosive Material
Water (7732-18-5)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

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

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision date : 05/03/15

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
H318	Causes serious eye damage
H319	Causes serious eye irritation

Party Responsible for the Preparation of This Document

Hyper+Ion® 1090

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

CHEMTRADE LOGISTICS, INC.

For SDS Info: (416) 496-5856

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Chemtrade North America SDS Template



The Public Health and Safety Organization

NSF Product and Service Listings

These NSF Official Listings are current as of **Monday, August 29, 2016** at 12:15 a.m. Eastern Time. Please [contact NSF International](#) to confirm the status of any Listing, report errors, or make suggestions.

Alert: NSF is concerned about fraudulent downloading and manipulation of website text. Always confirm this information by clicking on the below link for the most accurate information:

<http://info.nsf.org/Certified/PwsChemicals/Listings.asp?CompanyName=chemtrade&PlantState=Texas+TX&>

NSF/ANSI 60 Drinking Water Treatment Chemicals - Health Effects

Chemtrade Logistics, Inc.

155 Gordon Baker Road

Suite 300

Toronto, ON M2H 3N5

Canada

416-496-4113

[Visit this company's website](#)

<http://www.chemtradelogistics.com>

Facility : Beaumont, TX

Sodium Bisulfite[1]

Trade Designation

Sodium Bisulfite

Product Function

Dechlorinator & Antioxidant

Max Use

50mg/L

[1] This product contains sulfite.

Sulfites have been known to cause potentially lethal allergic reactions in sulfite-sensitive individuals.

The maximum recommended allowable residual sulfite level in the finished drinking water is 100 ppb (0.1 mg/L).

Sulfuric Acid

Trade Designation

93% Sulfuric Acid

98% Sulfuric Acid

99% Sulfuric Acid

Product Function

pH Adjustment

pH Adjustment

pH Adjustment

Max Use

50mg/L

50mg/L

50mg/L

Exhibit "A"

Chemtrade Solutions LLC (formerly General Chemical LLC)

1421 Willis Avenue

Syracuse, NY 13204

United States

315-478-2323

[Visit this company's website](#)[\(http://www.chemtradelogistics.com/main/\)](http://www.chemtradelogistics.com/main/)**Facility : Celina, TX****Ammonium Sulfate****Trade Designation**

Ammonium Sulfate Solution

Liquid Ammonium Sulfate

Product Function

Chloramination

Chloramination

Max Use

40mg/L

40mg/L

Ferric Sulfate**Trade Designation**

60% LFS

Fe₃

Fer+Ion® F10

Fer+Ion® F15

Fer+Ion® F20

Fer+Ion® F3

Fer+Ion® F5

Fer+Ion® F7

Ferric Sulfate 50%

Ferric Sulfate 55%

Ferric Sulfate 60%

Ferric Sulfate Solution

Liquid Ferric Sulfate

Product Function

Coagulation & Flocculation

Coagulation & Flocculation

Coagulation & Flocculation

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Coagulation & Flocculation

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Coagulation & Flocculation

Coagulation & Flocculation

Coagulation & Flocculation

Coagulation & Flocculation

Max Use

600mg/L

600mg/L

488mg/L

336mg/L

256mg/L

612mg/L

620mg/L

674mg/L

600mg/L

600mg/L

600mg/L

600mg/L

600mg/L

Polymer Blends**Trade Designation**

Fer+Ion® 202.5

Fer+Ion® 205

Fer+Ion® 2050

Fer+Ion® 2055

Fer+Ion® 210

Fer+Ion® 2100

Fer+Ion® 2105

Fer+Ion® 215

Fer+Ion® 302.5[PY]

Fer+Ion® 305[PY]

Product Function

Coagulation & Flocculation

Coagulation & Flocculation

Coagulation & Flocculation

Coagulation & Flocculation

Coagulation & Flocculation

Coagulation & Flocculation

Coagulation & Flocculation

Coagulation & Flocculation

Coagulation & Flocculation

Coagulation & Flocculation

Max Use

250mg/L

250mg/L

417mg/L

417mg/L

250mg/L

227mg/L

227mg/L

166mg/L

250mg/L

250mg/L

Exhibit "A"

Fer+Ion® 3050[PY]	Coagulation & Flocculation	400mg/L
Fer+Ion® 3055[PY]	Coagulation & Flocculation	400mg/L
Fer+Ion® 310[PY]	Coagulation & Flocculation	200mg/L
Fer+Ion® 3100[PY]	Coagulation & Flocculation	200mg/L
Fer+Ion® 3105[PY]	Coagulation & Flocculation	200mg/L

[PY] Polyamines Certified by NSF International comply with 40 CFR 141.111 requirements for percent monomer and dose.

Facility : Odem, TX

Aluminum Chlorohydrate[AL] [CP]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Gen+Pac® 2370	Coagulation & Flocculation	250mg/L
Hyper+Ion® 1090	Coagulation & Flocculation	250mg/L
Hyper+Ion® 92005	Coagulation & Flocculation	250mg/L

[AL] Based on an evaluation of health effects data, the level of aluminum in the finished drinking water shall not exceed 2 mg/L.

[CP] The finished drinking water shall be monitored to ensure that levels of copper do not exceed 1.3 mg/L.

Aluminum Sulfate[AL]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Alum	Coagulation & Flocculation	400mg/L
Aluminum Sulfate	Coagulation & Flocculation	400mg/L
Clar+Ion® 9341[CP] [PO]	Coagulation & Flocculation	400mg/L
Clar+Ion® CS[CP]	Coagulation & Flocculation	110mg/L
Clar+Ion® CS12[CP]	Coagulation & Flocculation	110mg/L
Clar+Ion® CS4[CP]	Coagulation & Flocculation	400mg/L
Clar+Ion® CS8[CP]	Coagulation & Flocculation	200mg/L
Liquid Alum	Coagulation & Flocculation	400mg/L

[AL] Based on an evaluation of health effects data, the level of aluminum in the finished drinking water shall not exceed 2 mg/L.

[CP] The finished drinking water shall be monitored to ensure that levels of copper do not exceed 1.3 mg/L.

[PO] The finished drinking water shall be monitored to ensure that levels of manganese do not exceed 0.05 mg/L.

Exhibit "A"

Ammonium Sulfate

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Ammonium Sulfate Solution	Chloramination	40mg/L
Liquid Ammonium Sulfate	Chloramination	40mg/L

Blended Phosphates

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Genhib 1881	Corrosion & Scale Control	25mg/L
	Sequestering	
Genhib 1883	Corrosion & Scale Control	25mg/L
	Sequestering	
Genhib 1885	Corrosion & Scale Control	25mg/L
	Sequestering	

Citric Acid[1]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Citric Acid Solution	Membrane Cleaner	NA
Genclean 704	Membrane Cleaner	NA
Liquid Citric Acid	Membrane Cleaner	NA

[1] This product is designed to be used off-line and flushed out prior to using the system for drinking water, following manufacturer's use instructions.

Copper Sulfate[CP]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Aqua-Ox 446[PO]	Algicide	16mg/L
Copper Sulfate Solution	Algicide	16mg/L
Liquid Copper Sulfate 25%	Algicide	16mg/L

[CP] The finished drinking water shall be monitored to ensure that levels of copper do not exceed 1.3 mg/L.

[PO] The finished drinking water shall be monitored to ensure that levels of manganese do not exceed 0.05 mg/L.

Poly (Diallyldimethylammonium Chloride)(pDADMAC)

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Clar+Ion® P825	Coagulation & Flocculation	50mg/L
Clar+Ion® P830	Coagulation & Flocculation	50mg/L
Clar+Ion® P846	Coagulation & Flocculation	50mg/L
Clar+Ion® P850	Coagulation & Flocculation	50mg/L
Clar+Ion® P855	Coagulation & Flocculation	50mg/L
Clar+Ion® P9160	Coagulation & Flocculation	32mg/L
Clar+Ion® P9161	Coagulation & Flocculation	32mg/L

Exhibit "A"

Clar+Ion® P917

Coagulation & Flocculation

25mg/L

Polyacrylamide[PC]**Trade Designation****Product Function****Max Use**

Hyper+Lyte 30

Coagulation & Flocculation

3.5mg/L

[PC] Polyacrylamide Products Certified by NSF International comply with 40 CFR 141.111 requirements for percent monomer and dose.

Polyaluminum Chloride[AL] [CP]**Trade Designation****Product Function****Max Use**

Gen+Pac® 2370

Coagulation & Flocculation

250mg/L

Hyper+Ion® 1090

Coagulation & Flocculation

250mg/L

Hyper+Ion® 92005

Coagulation & Flocculation

250mg/L

[AL] Based on an evaluation of health effects data, the level of aluminum in the finished drinking water shall not exceed 2 mg/L.

[CP] The finished drinking water shall be monitored to ensure that levels of copper do

not exceed 1.3 mg/L.

Polymer Blends**Trade Designation****Product Function****Max Use**

Clar+Ion A403P[AL] [PY]

Coagulation & Flocculation

400mg/L

Clar+Ion® 9100[AL] [CP]

Coagulation & Flocculation

400mg/L

Clar+Ion® 91008[AL] [CP]

Coagulation & Flocculation

200mg/L

Clar+Ion® 91012[AL] [CP]

Coagulation & Flocculation

400mg/L

Clar+Ion® 91014[AL] [CP]

Coagulation & Flocculation

400mg/L

Clar+Ion® 91018[AL] [CP]

Coagulation & Flocculation

200mg/L

Clar+Ion® 91024[AL] [CP]

Coagulation & Flocculation

400mg/L

Clar+Ion® 910312[AL] [CP]

Coagulation & Flocculation

110mg/L

Clar+Ion® 91034[AL] [CP]

Coagulation & Flocculation

400mg/L

Clar+Ion® 91042[AL] [CP]

Coagulation & Flocculation

400mg/L

Clar+Ion® 91044[AL] [CP]

Coagulation & Flocculation

400mg/L

Clar+Ion® 91048[AL] [CP]

Coagulation & Flocculation

200mg/L

Clar+Ion® 91054[AL] [CP]

Coagulation & Flocculation

400mg/L

Clar+Ion® 91108[AL] [CP]

Coagulation & Flocculation

200mg/L

Clar+Ion® 91212[AL] [CP]

Coagulation & Flocculation

400mg/L

Clar+Ion® 91214[AL] [CP]

Coagulation & Flocculation

400mg/L

Clar+Ion® 914112[AL] [CP]

Coagulation & Flocculation

110mg/L

Clar+Ion® 91414[AL] [CP]

Coagulation & Flocculation

400mg/L

Clar+Ion® 91734[AL] [CP]

Coagulation & Flocculation

400mg/L

Clar+Ion® A402H[AL] [PY]

Coagulation & Flocculation

400mg/L

Clar+Ion® A403H[AL] [PY]

Coagulation & Flocculation

400mg/L

Clar+Ion® A4041[AL] [PY]

Coagulation & Flocculation

400mg/L

Clar+Ion® A4041M[AL] [PY]

Coagulation & Flocculation

400mg/L

Exhibit "A"

Clar+Ion® A410P[AL]	Coagulation & Flocculation	250mg/L
Clar+Ion® A412P[AL]	Coagulation & Flocculation	208mg/L
Clar+Ion® A4522[AL] [PY]	Coagulation & Flocculation	400mg/L
Clar+Ion® P950[PY]	Coagulation & Flocculation	40mg/L
Clar+Ion® P951[PY]	Coagulation & Flocculation	40mg/L
Hyper+Ion® 92300[AL] [PY]	Coagulation & Flocculation	150mg/L
Hyper+Ion® 92303[AL] [CP]	Coagulation & Flocculation	300mg/L
Hyper+Ion® 9233[AL] [PY]	Coagulation & Flocculation	150mg/L
Hyper+Ion® 92412[AL] [CP]	Coagulation & Flocculation	300mg/L
Hyper+Ion® 92413[AL] [CP]	Coagulation & Flocculation	300mg/L
Hyper+Ion® 92414[AL] [CP]	Coagulation & Flocculation	300mg/L
Hyper+Ion® 92415[AL] [CP]	Coagulation & Flocculation	300mg/L

[AL] Based on an evaluation of health effects data, the level of aluminum in the finished drinking water shall not exceed 2 mg/L.

[CP] The finished drinking water shall be monitored to ensure that levels of copper do not exceed 1.3 mg/L.

[PY] Polyamines Certified by NSF International comply with 40 CFR 141.111 requirements for percent monomer and dose.

Sodium Hydroxide

Trade Designation	Product Function	Max Use
Caustic Soda 20-30%	Corrosion & Scale Control pH Adjustment	167mg/L
Caustic Soda 50%	Corrosion & Scale Control pH Adjustment	100mg/L

Sodium Polyphosphates, Glassy

Trade Designation	Product Function	Max Use
Genhib 190	Corrosion Control	25mg/L
Liquid SHMP	Corrosion Control	25mg/L
Liquid Sodium Hexametaphosphate	Corrosion Control	25mg/L
Sodium Hexametaphosphate	Corrosion Control	25mg/L

Zinc Orthophosphate[ZN]

Trade Designation	Product Function	Max Use
Genhib 185	Corrosion Control	12mg/L
Zinc Orthophosphate	Corrosion Control	12mg/L

[ZN] Based on an evaluation of health effects data, the level of zinc in the finished drinking water shall not exceed 2.0 mg/L.

Facility : Terrell, TX

Exhibit "A"

Aluminum Chlorohydrate[AL]

Trade Designation	Product Function	Max Use
EC-409	Coagulation & Flocculation	250mg/L
Gen+Pac® 2370	Coagulation & Flocculation	250mg/L
Hyper+Ion® 1030	Coagulation & Flocculation	250mg/L
Hyper+Ion® 1060	Coagulation & Flocculation	250mg/L
Hyper+Ion® 1090	Coagulation & Flocculation	250mg/L
Hyper+Ion® 2662	Coagulation & Flocculation	250mg/L
Hyper+Ion® 2767	Coagulation & Flocculation	250mg/L
Hyper+Ion® 4393	Coagulation & Flocculation	250mg/L
Hyper+Ion® 5523	Coagulation & Flocculation	250mg/L
Hyper+Ion® 5848	Coagulation & Flocculation	250mg/L
Hyper+Ion® 5969	Coagulation & Flocculation	250mg/L
Hyper+Ion® 6311	Coagulation & Flocculation	250mg/L
Hyper+Ion® 6791	Coagulation & Flocculation	250mg/L
Hyper+Ion® 700	Coagulation & Flocculation	250mg/L
Hyper+Ion® 7136	Coagulation & Flocculation	250mg/L
Hyper+Ion® 8551	Coagulation & Flocculation	250mg/L
Hyper+Ion® 8673	Coagulation & Flocculation	250mg/L
Hyper+Ion® 8962	Coagulation & Flocculation	250mg/L
Hyper+Ion® 9213	Coagulation & Flocculation	250mg/L
PAC® 2370	Coagulation & Flocculation	250mg/L

[AL] Based on an evaluation of health effects data, the level of aluminum in the finished drinking water shall not exceed 2 mg/L.

Aluminum Sulfate[AL]

Trade Designation	Product Function	Max Use
Alum	Coagulation & Flocculation	400mg/L
Aluminum Sulfate	Coagulation & Flocculation	400mg/L
Clar+Ion® CS[CP]	Algicide	110mg/L
	Coagulation & Flocculation	
Clar+Ion® CS4[CP]	Algicide	400mg/L
	Coagulation & Flocculation	
Liquid Alum	Coagulation & Flocculation	400mg/L

[AL] Based on an evaluation of health effects data, the level of aluminum in the finished drinking water shall not exceed 2 mg/L.

[CP] The finished drinking water shall be monitored to ensure that levels of copper do not exceed 1.3 mg/L.

Polyaluminum Chloride[AL]

Trade Designation	Product Function	Max Use
EC-409	Coagulation & Flocculation	250mg/L

Exhibit "A"

Hyper+Ion® 4616	Coagulation & Flocculation	250mg/L
Hyper+Ion® 4948	Coagulation & Flocculation	250mg/L
Hyper+Ion® 5244	Coagulation & Flocculation	250mg/L
Hyper+Ion® 5632	Coagulation & Flocculation	250mg/L
Hyper+Ion® 6121	Coagulation & Flocculation	250mg/L
Hyper+Ion® 6865	Coagulation & Flocculation	250mg/L
Hyper+Ion® 701	Coagulation & Flocculation	250mg/L
Hyper+Ion® 702	Coagulation & Flocculation	250mg/L
Hyper+Ion® 705	Coagulation & Flocculation	250mg/L
Hyper+Ion® 710	Coagulation & Flocculation	200mg/L
Hyper+Ion® 720	Coagulation & Flocculation	100mg/L
Hyper+Ion® 7244	Coagulation & Flocculation	250mg/L
Hyper+Ion® 725D	Coagulation & Flocculation	87mg/L
Hyper+Ion® 7287	Coagulation & Flocculation	250mg/L
Hyper+Ion® 735	Coagulation & Flocculation	57mg/L
Hyper+Ion® 7420	Coagulation & Flocculation	250mg/L
Hyper+Ion® 7793	Coagulation & Flocculation	250mg/L
Hyper+Ion® 7918	Coagulation & Flocculation	250mg/L
Hyper+Ion® 802	Coagulation & Flocculation	250mg/L
Hyper+Ion® 805	Coagulation & Flocculation	250mg/L
Hyper+Ion® 810	Coagulation & Flocculation	250mg/L
Hyper+Ion® 8135	Coagulation & Flocculation	250mg/L
Hyper+Ion® 835	Coagulation & Flocculation	71mg/L
Hyper+Ion® 8364	Coagulation & Flocculation	250mg/L
Hyper+Ion® 8518	Coagulation & Flocculation	250mg/L
Hyper+Ion® 9291	Coagulation & Flocculation	250mg/L
Hyper+Ion® 9369	Coagulation & Flocculation	250mg/L

[AL] Based on an evaluation of health effects data, the level of aluminum in the finished drinking water shall not exceed 2 mg/L.

[PY] Polyamines Certified by NSF International comply with 40 CFR 141.111 requirements for percent monomer and dose.

Number of matching Manufacturers is 2

Number of matching Products is 206

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Exhibit "A"