

BID PROPOSAL FORM

(Use this form only)

February 1, 2016

Bid No. 16-0006

The CITY OF DURHAM invites your bid for a **Term Contract for Liquid Aluminum Sulfate** to be opened at **2:00pm., Tuesday March 1, 2016**, in the City Hall (Audit Conference Room) Room 1A, 1st Floor, 101 City Hall Plaza (Annex), Durham, North Carolina 27701.

Use this form only, for submitting bids. In submitting your proposal, keep in mind any alternations, changes in bid format, etc. will make it difficult to evaluate bids. All items should be bid in the units, quantities, units of measurements, etc. specified. Do not submit alternates unless requested. The City reserves the right to reject any or all proposals.

If the City of Durham issues to the bidder a Purchase Order that refers to the Bid Number shown on this bid, the bidder shall provide the quantities of goods required by the City during the period shown in the "Delivery" box on the Purchase Order (which period begins on the Order Date shown on the Purchase Order) unless that period is changed as provided in the bid documents. The bidder will not be obligated to fulfill a Purchase Order for a quantity that is not in accordance with the quantity limitations, if any, in the bid documents. The bid documents include all conditions, specifications, and terms on file in the City's Purchasing Division under that Bid Number.

Return the following: Bid Proposal Form(s), Bid Deposit (if required), Documentation (if required), SDBE data forms, and Warranty (if applicable) to: *(see mailing instructions – under Instructions to Bidders No. 21).*

Complete all three boxes. Failure to give specific information may nullify bid.

Payment Terms <u>Net 30</u>	Delivery to be <u>2-3</u> days after receipt of order.	Method of Delivery: <input checked="" type="checkbox"/> Truck <input type="checkbox"/> Rail <input type="checkbox"/> Other (specify) _____	Deliveries to be F.O.B. DESTINATION
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I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, or person submitting a bid for the same materials, supplies, or equipment and is in all respects fair without collusion or fraud. I understand collusive bidding is a violation of state and federal law and can result in fines, prison sentences, and civil damage awards. The bidder hereby makes an offer to the City of Durham in accordance with the bid documents, including this Bid Proposal Form and all enclosures. The undersigned individual certifies that he or she is authorized to sign this bid for the bidder.

Date 2/24/16

The following are enclosed: (check all applicable)

- Brochures
- Warranty

C&S Chemicals
 OFFICIAL LEGAL NAME OF BIDDER
2190 Providence Rd, Suite 310
 ADDRESS
Marietta GA 30062
 CITY STATE ZIP CODE

[Signature]
 AUTHORIZED SIGNATURE
Mike Chandler Vice President

PRINT NAME TITLE
(770) 977-2669 (770) 373-4597
 TELEPHONE NO FAX NO.

58-1380323

FEDERAL I.D. NUMBER
sales@candchemicals.com/www.candchemicals.com
 EMAIL/WEB SITE ADDRESS



4185 Providence Rd
Suite 310
Mableton, GA 30068

RE: Affidavit of Compliance to AWWA Standards

To whom it may concern,

C&S Chemicals, Inc. is a direct manufacturer of Liquid Aluminum Sulfate. Our Aluminum Sulfate is NSF Certified and meets or exceeds all AWWA standards for this product.

If there are any questions as to the quality of the Aluminum Sulfate or any specific tests needed on the product, please contact me at 770.977.2669 or sales@candschemicals.com.

I want to personally thank you for your consideration in C&S Chemicals, Inc. and I look forward to working with you!

Sincerely,

A handwritten signature in black ink, appearing to read 'Mike Chandler', with a long horizontal flourish extending to the right.

Mike Chandler
Vice President

COMPLETE THIS FORM
DECLARATION OF PERFORMANCE BY VENDOR/CONTRACTOR

Briefly address each of the following items:

1. A brief synopsis of the company and the products/services it provides:

*CIS Chemicals manufactures and delivers
Aluminum Sulfate on company-owned trucks*

2. Describe the normal procedure used on a bid of this type, giving the flow of purchase from the company to the ultimate purchaser:

*CIS receives PO/order and confirms
delivery with customer to take place within 1-3 days.*

3. List anyone outside of your company with whom you will contract on this bid:

N/A

The undersigned vendor/contractor certifies that:

- (a) It is normal business practice of the vendor/contractor to perform all elements of the contract with its own work force without the use of subcontractors/vendors; and
- (b) That the above documentation demonstrates this firm's capabilities to perform all elements of the contract with its own work force or without the use of subcontractors/vendors.

2/23/16
Date


Authorized Signature



4700 Peachtree Rd.
Suite 310
Atlanta, GA 30322

Affirmative Action/Equal Opportunity Statement

C&S Chemicals, Inc is an Equal Opportunity and Affirmative Action Employer.

The company does, and will continue to, provide all applicants for employment and all employees with equal opportunity for employment and promotion regardless of race, color, religion, gender, national origin, disability, veteran status, age, sexual orientation, or genetic information

C&S Chemicals, Inc abides by all federal regulations in incorporating Affirmative Action into its procedures. There will be a good faith effort to increase the consideration, promotion, hiring, and effective utilization of Minorities and Females in all job groups. Minorities and Females, Persons with Disabilities and Veterans, and all others will be encouraged to take advantage of opportunities at the company.

The company intends to fulfill the spirit of Equal Opportunity and Affirmative Action by ensuring the company's relationship with prospective and present employees without bias

This statement has been updated as of January 1, 2014.

Gregory P. Chandler
Owner-C&S Chemicals, Inc.

COMPLETE THIS FORM
EQUAL OPPORTUNITY STATEMENT

COMPLETE THIS FORM OR ATTACH COMPUTERIZE FORM

EMPLOYEE BREAKDOWN

Part A – Employee Statistics for the Primary Location

Employment Category	M-----a-----l-----e-----s						F-----e-----m-----a-----l-----e-----s						
	Total Employees	Total Males	Total Females	White	Black	Hispanic	Asian or Pacific Islander	Indian or Alaskan Native	White	Black	Hispanic	Asian or Pacific Islander	Indian or Alaskan Native
Project Manger	3	3	0	3	0	0							
Professiona l													
Labor													
Clerical	2		2						1	1			
Totals	5	3	2	3					1	1			

Part B – Employee Statistics for the Consolidated Company (See instructions for this form on whether this part is required.)

Employment Category	M-----a-----l-----e-----s						F-----e-----m-----a-----l-----e-----s						
	Total Employees	Total Males	Total Females	White	Black	Hispanic	Asian or Alaskan Islander	Indian or Alaskan Native	White	Black	Hispanic	Asian or Pacific Islander	Indian or Alaskan Native
Project Manger	4	3	1	3					1				
Professional	4	4		4									
Labor	20	20		24	2								
Clerical	2		2						1	1			
Totals	36	33	3	31	2				2	1			



CITY OF DURHAM

Finance Department

101 CITY HALL PLAZA, ANNEX BLDG. | DURHAM, NC 27701

919.560.4132 | F 919.560.4325

www.durhamnc.gov

February 22, 2016

ADDENDUM NO. 1

Bid No. 16-0006

TERM CONTRACT FOR LIQUID ALUMINUM SULFATE (LAS)

Notice to: Prospective Bidders

This addendum containing the following additions, clarifications, and/or changes, is issued prior to receipt of bids and does hereby become part of the original specifications and documents and supersedes the original specifications and documents in case of conflict. Receipt of this addendum must be acknowledged by signing in the area indicated below. **This addendum must be signed and returned with your sealed bid.** In the event that your sealed bid has been mailed prior to receiving this addendum, you may submit the addendum by fax or in a second sealed envelope clearly marked as an addendum to be attached to **Bid No.16-0006**. This addendum and bid response must be received by **2:00pm**, on the **1st day of March, 2016** as amended below. Failure to do so will result in the disqualification of the corresponding bid.

The pre-bid meeting will be moved from **16th of February 2016 at 10:00 a.m.**, in the Finance Department Conference Room, 1st Floor, 101 City Hall Plaza (Annex), Durham, North Carolina to **16th of February 2016 at 11:30 a.m.**, in the Budget Department Conference Room, 1st Floor, 101 City Hall Plaza, Durham, North Carolina.

See specifications:

Please see attached "AFFIDAVIT OF COMPLIANCE" form. Please complete and send it with your proposal.

All other specifications, terms and conditions remain as required in the initial Request for Bids.

Respectfully,

Jonathan Hawley

Purchasing Supervisor
Purchasing Division

I have read and acknowledge receipt of Addendum No. 1

Company: C&S Chemicals Date: 2/24/16

Name: Mike Chandler Signature: 

AFFIDAVIT OF COMPLIANCE

SECTION D CERTIFICATIONS AND REFERENCES

D.1 STATEMENT OF ENVIRONMENTAL LAW COMPLIANCE

It is the intention of Durham to contract with manufacturers, agents, and distributors with a proven record of responsibility and concern for our natural environment in North Carolina and elsewhere.

If, within the past ten years, your company has been found in violation of laws intended to safeguard the natural environment or regulations prescribing specific steps regarding the manufacturing, handling, and transportation of certain chemicals, give date, location, and a brief explanation here. Past violations will not necessarily disqualify a bidder. If your company has not been found in violation, so state.

None

I hereby certify that this is a complete and accurate representation of this company's compliance with environmental laws and regulations.

BY (signed):

DATE

2/24/16

PRINTED NAME AND TITLE:

Mike Chandler Vice President

COMPANY

C&S Chemicals

ADDRESS

4100 Providence Road Suite 310 Marietta GA 30062

D.2 REFERENCES Provide at least two references of companies or agencies to which you have supplied the same or similar chemicals within the past five years.

D.2.1 Company

Commissioners of Public Works

Address

Greenwood SC water Treatment Plant

202 Water Plant Rd Greenwood SC 29649

Point of Contact

David Tuck

Phone

864 942 8100

Contract or PO reference number

Inclusive Dates

current

AFFIDAVIT OF COMPLIANCE

D.2.2 Company Harnett County NC
Address 102 East Front Street
Lillington NC 27546
Point of Contact Renee Warren-Ford Phone 910 893 7557
Contract or PO reference number _____
Inclusive Dates Current

D.2.3 Company DeKalb County GA
Address 1300 Commerce Drive
Decatur GA 30030
Point of Contact Maceo Haywood Phone 404 371 0814
Contract or PO reference number _____
Inclusive Dates current

NSF Product and Service Listings

These Listings were Last Updated on **Thursday, January 26, 2012** at 12:15 a.m. Eastern Time.
Please contact NSF International to confirm the status of any Listing, report errors, or make suggestions.

ANSI/NSF STANDARD 60 Drinking Water Treatment Chemicals- Health Effects

C&S CHEMICALS, INC.
4180 PROVIDENCE ROAD
BUILDING 300, SUITE 310
MARIETTA, GA 30062
770-977-2669

Plant at: BARTOW, FL

Aluminum Sulfate [AL]

Trade Designation	Product Function	Max Use
Alum	Coagulation & Flocculation	150 mg/L
Aluminum	Coagulation & Flocculation	150 mg/L

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

Plant at: AUSTELL, GA

Aluminum Sulfate [AL]

Trade Designation	Product Function	Max Use
Aluminum Sulfate	Coagulation & Flocculation	150 mg/L
Alum	Coagulation & Flocculation	150 mg/L

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

Plant at: ST. PAUL, MN

Aluminum Sulfate [AL]

Trade Designation	Product Function	Max Use
Alum	Coagulation & Flocculation	150 mg/L
Aluminum	Coagulation & Flocculation	150 mg/L

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

Plant at: DARLINGTON, SC

Aluminum Sulfate [AL]

Trade Designation	Product Function	Max Use
Aluminum Sulfate	Coagulation & Flocculation	150 mg/L
Liquid Alum	Coagulation & Flocculation	150 mg/L
Papermakers Alum	Coagulation & Flocculation	150 mg/L

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

Plant at: GREENWOOD, SC

Aluminum Sulfate [AL]

Trade Designation	Product Function	Max Use
Aluminum Sulfate	Coagulation & Flocculation	150 mg/L
Alum	Coagulation & Flocculation	150 mg/L

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

Number of matching Manufacturers is 1
Number of matching Products is 11
Processing time was 0 seconds

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4180 Providence R.d.
Suite 310
Marietta, GA 30062

PRODUCT SPECIFICATIONS

Standard Grade Alum

Aluminum Sulfate- $Al_2(SO_4)_3 \cdot (14H_2O)$

<u>CHARACTERISTIC</u>	<u>LIMITS</u>	<u>TYPICAL VALUES</u>
1) Appearance	Clear, water white to pale green, yellow green, or red	Clear, water white to pale green, yellow green or red
2) Specific Gravity @ 60 deg. F	1.3182-1.3364	1.333
3) Total Al_2O_3 % From S.G. Chart	7.92-8.32	8.24
4) Percent Alum @ 17%	46.6%-49.0%	48.5
5) Total Fe as Fe_2O_3 (As Is Basis)	<2500 ppm Max	<2000 ppm
6) Turbidity, NTU	Reasonably clear and will permit the reading of flow measuring devices without difficulty	Reasonably clear and will permit the reading of flow measuring devices without difficulty
7) Lbs Alum per Gallon	5.12-5.45	5.39
8) pH	1.5-2.4	1.9

Product meets AWWA requirements.



CERTIFIED TO NSF/ANSI 60

MAXIMUM USE FOR POTABLE WATER 150mg/L

Approved:

Greg Chandler, Vice President
March 16, 2011



4180 Providence Rd
Suite 310
Marietta, GA 30062

Aluminum Sulfate, Solution

Safety Data Sheet

SDS ID: 001001

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name: Aluminum sulfate, solution

Product Name: Aluminum Sulfate, Solution
Other names: Liquid Alum; Aluminum sulfate liquid
Manufacturer Information: C&S Chemicals, Inc.
4180 Providence Road
Suite 310
Marietta, GA 30062
770-977-2669

Emergency Number: In Case of Emergency, Call *Chemtrec* at 1-800-424-9300

Chemical Family: Inorganic Salt

Molecular Formula: $Al_2(SO_4)_3 \cdot 14H_2O$
Intended/Recommended Use: Water treatment coagulant, flocculent; paper and pulp; dyes.

Section 2 - HAZARDS IDENTIFICATION

Product Identifier: Aluminum Sulfate (Alum)

Hazard Statements:
Harmful if ingested
Contact with eyes may result in damage
Irritating to skin and eyes
Mist is irritating to respiratory system

Precautionary Statements:
Avoid Direct Contact
Use protective equipment if direct contact is possible
Wash hands thoroughly after contact

GHS Classifications:
Skin Irritation, Category 2
Eye Irritation, Category 2

Symbol:



Signal Word: WARNING

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component	Percent W/W	OSHA (PEL)	ACGIH(TLV)	Carcinogen
10043-01-3	Aluminum Sulfate	90-100	2mg/m ³ as Al (TWA)	2 mg/m ³ as Al (TWA)	None-
7732-18-5	Water	<50	N/A	N/A	None

Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Aluminium compounds.

Section 4 - FIRST AID MEASURES

Inhalation:

Remove victim from area of exposure – avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Give artificial respiration if not breathing. Get immediate medical attention.

Skin Contact:

If skin or hair contact occurs, immediately remove any contaminated clothing and wash skin and hair thoroughly with water for at least 15 minutes. If swelling, redness, blistering or irritation occurs seek medical assistance.

Eyes Contact:

Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

Ingestion:

Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass water. Seek immediate medical attention.

Section 5 - FIRE FIGHTING MEASURES

See Section 9 for Flammability Properties

NFPA Ratings: Health: 1 Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe

Flammable Properties

Negligible fire hazard.

Extinguishing Media

Use extinguishing agents appropriate for surrounding fire.

Fire Fighting Measures

Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion byproducts. Stay upwind and keep out of low areas.

Thermal Decomposition Products

Combustion: oxides of sulfur

Sensitivity to Mechanical Impact

Not sensitive

Sensitivity to Static Discharge

Not sensitive

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Restrict access until clean-up operations are complete: Wear appropriate Personal Protective Equipment per Section 8. Stop leak if possible without personal risk.

Method For Cleaning Up:

Small Spills: Absorb with clay or dry material or neutralize with lime, or soda ash and collect in appropriate container for disposal.

Large Spills: Prevent entry into sewers and confined areas. Dike, if possible. Keep unnecessary people away, isolate area and deny entry. Pump liquid material into appropriate containers as possible or absorb spill with clay absorbents or non-reactive dry materials and collect in appropriate container for disposal.

Neutralize spill residuals carefully with lime, limestone, or soda ash and collect in suitable container for disposal. Flush area with water. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA).

Section 7 - HANDLING AND STORAGE

Handling

Precautionary Measures: Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

Special Handling Statements: Review the label, this MSDS and any other applicable information before use. Keep separated from incompatible substances. Use appropriate personal Protective Equipment per Section 8. Handle only with equipment and materials and supplies specified by the manufacturer as being compatible and appropriate with this product.

Storage: Store in a cool, dry, well ventilated place. Store away from incompatible materials described in Section 10. Keep containers closed when not in use – check regularly for leaks.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

ACGIH have not developed exposure limits for any of this product's components.

Ventilation

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Eyes/Face

Wear splash resistant safety goggles with a faceshield.

Protective Clothing

Wear appropriate chemical resistant clothing.

Glove Recommendations

Wear appropriate chemical resistant gloves.

Respiratory Protection

Under conditions of frequent use or heavy exposure, respiratory protection may be needed.

Respiratory protection is ranked in order from minimum to maximum.

Consider warning properties before use.

Any air-purifying full-facepiece respirator equipped with appropriate high efficiency particulate filters. If determine by a risk assessment, an inhalation risk exists, wear a suitable mist respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

For Unknown Concentrations or Immediately Dangerous to Life or Health -

Any supplied-air respirator or self-contained breathing apparatus (SCBA) with a full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid colorless to clear
Characteristics: amber or
p clear light green liquid
H: 1.8 -2.4 @ 20°C
Evaporation Rate: 1 water=1
%VOC: 0.0
Vapor Density (air = 1): Not applicable
Vapor Pressure: Not applicable
Viscosity: 25 cps @ 20°C/68° F

Odor Threshold: Not applicable
Odor: Negligible odor
Boiling Point: 102° C
Melting Point: -13° C/9° F
Flash Point: Not applicable
Density: 11.1 lbs/gal 15.5 °C
Specific Gravity (water = 1): 1.32 - 1.34 @ 15.5 °C
Water Solubility: Complete

Section 10 - STABILITY AND REACTIVITY

Reactivity:	Reacts with metals
Chemical Stability:	Stable normal ambient and anticipated storage and handling conditions of temperatures and pressure.
Possibility of hazardous reactions:	Corrosive to some metals. Corrosive to aluminum. Corrosive to mild steel.
Conditions to avoid:	Avoid contact with alkalis.
Incompatible materials:	Incompatible with alkalis. Incompatible with some metals and other Materials (see 'hazardous Reactions').
Hazardous decomposition Products:	Oxides of sulfur. Oxides of aluminum

Section 11 - TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and over exposure occurs are:

Ingestion:	Swallowing can result in nausea, vomiting, diarrhea, and gastrointestinal irritation. May cause burns to mouth and throat.
Eye Contact:	An eye irritation.
Skin Contact:	Contact with skin will result in irritation.
Inhalation:	Breathing in mists or aerosols may produce respiratory irritation.

Acute toxicity: No LD50 data for the product for the constituent ALUMINUM SULFATE:

Oral LD50 (mice): 6207 mg/kg).

Oral > 90 mL/kg Oral Rat LD50.

Chronic toxicity: No information available for the product.

Section 12 - ECOLOGICAL INFORMATION

Aquatic Toxicity:	Toxic to aquatic organisms
Ecotoxicity:	Avoid contaminating waterways Fish: 96 Hr LC50 <i>Carassius auratus</i> : 100 mg/L; 96 Hr LC50 <i>Gambusia affinis</i> : 3.6 mg/L [static]
Terrestrial toxicity:	Harmful to terrestrial vertebrates

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262.
Hazardous Waste Number(s): D002 (Corrosive) if the pH is <2.
May be D002 under §261.22(a)(2) due to the rate of corrosion of steel.

Component Waste Numbers

The U.S. EPA has not published waste numbers for this product's components.

Section 14 - TRANSPORT INFORMATION

US DOT Information

Proper Shipping Name: Environmentally Hazardous Substance, liquid, n.o.s.
UN/ID: UN 3082
Transport Label Required: Class 9
Technical Name (N.O.S): Aluminum Sulfate, Solution
Reportable Quantity: 5000 lbs.

Comments: Hazardous Substance/Reportable Quantities – DOT requirements specific to Hazardous Substance only apply if the quantity in one package equals or exceeds the reportable quantity.

ICAO/IATA

Proper Shipping Name: Corrosive, liquid, acid, inorganic liquid, n.o.s.
UN/ID: UN 3264
Transport Label Required: Class 8
Packaging Group: III
Technical Name (N.O.S): Contains aluminum sulfate
Reportable Quantity: 5000 lbs.

IMO

Proper Shipping Name: Corrosive, liquid, acid, inorganic, n.o.s.
UN/ID: UN 3264
Transport Label Required: Class 8
Packing Group: III
Technical Name (N.O.S): Contains aluminum sulfate
Reportable Quantity: 5000 lbs.

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 311/312 (40 CFR 370.21), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

CERCLA: 5000 lb final RQ; 2270 kg final RQ

SARA Section 311/312 (40 CFR 370 Subparts B and C)

Acute Health: Yes; **Chronic Health:** No; **Fire:** No; **Pressure:** No; **Reactive:** No

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:
Not regulated under California Proposition 65

Section 16 - OTHER INFORMATION

SDS – Aluminum Sulfate – C&S Chemicals

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists;
CAS - Chemical Abstracts Service;
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act m
IATA - International Air Transport Association; ICAO - International Civil Aviation Organization;
IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP -
SARA - Superfund Amendments and Reauthorization Act;
STEL - Short-term Exposure Limit;
TSCA - Toxic Substances Control Act;
TWA - Time Weighted Average;
UEL - Upper Explosive Limit; US - United States

Other Information

THIS SDS IS TO BE UTILIZED SOLEY AS A REFERENCE DOCUMENT AND IT IS NOT TO BE USED TO SATISFY THE DISTRIBUTION REQUIREMENTS OF OSHA'S HAZARD COMMUNICATION STANDARD (HCS) NOR CANADA'S CONTROLLED PRODUCT REGULATION (CPR). Read the Material Safety Data Sheet before handling product.

Reasons For Issue: New SDS format

Revision:1.2

Authored By: C&S Chemicals
1-866-977-2669

Date: May 27, 2015

Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use. **Disclaimer:** Supplier gives no warranty of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the purchaser will make his own tests to determine the quality and suitability of the product. Supplier expressly disclaims any and all liability for incidental and/or consequential property damage arising out of the use of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights.

NSF International

Ann Arbor, MI • Sacramento, CA • Washington, D.C. • Brussels, Belgium

January 12, 1999

MRS. JEAN CHANDLER
C & S CHEMICALS, INC
1565 HEATH LANE
MARIETTA, GA 30062

Re: Revised Official Listing
Standard 60

Dear Mrs. Chandler:

It is my pleasure to enclose your revised Official Listing. Please review it for accuracy, including footnotes. If you have any questions or concerns about this revision, please promptly contact your NSF Representative.

C & S CHEMICALS, INC. is authorized to use the NSF Mark for products specified on this Official Listing.

As an NSF Listed Company, you are responsible for compliance with all NSF requirements for Certification services. Please note that your Listed products must bear the NSF Mark unless specifically exempted by policy. The NSF Mark is used with your Company's Listed products that are manufactured after this Official Listing date.

The enclosed certificate(s) , suitable for framing, may be displayed at your corporate location and each NSF-Listed facility. Additional copies may be purchased by contacting your Program Representative, Andrew Winklepleck at 734/913-5731.

Sincerely,

Connie L. Berry, Manager
Certification Records

encl. Revised Official Listing
Certificate

P.O. Box 130140 Ann Arbor, Michigan 48113-0140 USA
 734-769-8010 1-800-NSF-MARK Fax 734-769-0109
 E-Mail: info@nsf.org Web: http://www.nsf.org

Tracking ID: DA00627
 Project #: 110
 Region: 01
 NSF Field Representative: J. Hoyt

Lab Number: S009062918
 Description: Alum
 Sampled: JAN 21, 2000
 Received: SEP 05, 2000

Evaluation Dose: 150
 Product Form: Liquid
 NSF Standard: 60
 Tracking ID: DA00627
 Class Function: COAG/FLC

Parameter	Result	Control	Units	Entered
No Testing Performed on Parent Sample				

Lab Number: S009062919
 Description: Alum
 Sampled: JAN 21, 2000
 Received: SEP 05, 2000

Normalization Information:

$A_r = -$ $A_1 = 2260$ $A_c = 2260$
 $V_r = -$ $V_1 = 1.50$ $V_c = 1.50$
 $T_r = -$ $T_1 = -$ $T_c = -$
 $NF_1 = 0.0995575221$ $NF_2 = 1$ $NF_c = 0.0995575221$
 $NF_x = 1$ Maximum Use Level (MUL) = 150

Parameter	Result	Control	Normalized Result	Units	Entered
Additives Sample Preparation Information (Std. 60)					
Date exposure complete	07-SEP-00	Unavail			11-SEP-00
Preparation method used	Q	Unavail			11-SEP-00
Mass of material used (Al)	2260	Unavail		mg	11-SEP-00
Final volume of solution (V1)	1.50	Unavail		liters	11-SEP-00
Antimony	ND(0.6)	ND(0.6)	ND(0.06)	ug/L	14-SEP-00
Arsenic	ND(2)	ND(2)	ND(0.2)	ug/L	14-SEP-00
Barium	90	ND(1)	8.9 s	ug/L	14-SEP-00
Beryllium	ND(0.5)	ND(0.5)	ND(0.05)	ug/L	14-SEP-00
Cadmium	0.6	ND(0.3)	0.06 s	ug/L	14-SEP-00

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Parameter	Result	Control	Normalized Result	Units	Entered
Chromium	ND(1)	ND(1)	ND(0.1)	ug/L	14-SEP-00
Copper	ND(1)	ND(1)	ND(0.1)	ug/L	14-SEP-00
Lead	ND(1)	ND(1)	ND(0.1)	ug/L	14-SEP-00
Mercury	ND(0.2)	ND(0.2)	ND(0.02)	ug/L	14-SEP-00
Selenium	ND(6)	ND(6)	ND(0.6)	ug/L	14-SEP-00
Thallium	ND(0.2)	ND(0.2)	ND(0.02)	ug/L	14-SEP-00
Semivolatile Compounds, Base/Neutral 625					
N- Nitrosodimethylamine	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
N- Nitrosomethylethylamine	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
N- Nitrosodiethylamine	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
Cyclohexanone	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
Aniline	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
2-Ethyl-1-hexanol	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
Benzenemethanol (Benzylalcohol)	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
N- Nitrosopymolidine	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
N- Nitrosodi-n-propylamine	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
1-Phenylethanone (Acetophenone)	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
N- Nitrosomorpholine	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
2-Phenyl-2-propanol	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
N- Nitrosopiperidine	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
Isophorone	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
Naphthalene	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
Benzothiazole	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
N- Nitrosodi-n-butylamine	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
2-Methylnaphthalene	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00

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Parameter	Result	Control	Normalized Result	Units	Entered
a, a-Dimethyl-p-isopropylbenzenemethanol	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
Dimethylphthalate	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
aaa'a Tetramethyl-1,4-benzenedimethanol	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
Acenaphthene	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
Diethylphthalate	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
Fluorene	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
N-Nitrosodiphenylamine	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
Phenanthrene	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
Anthracene	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
Di-n-butylphthalate	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
Fluoranthene	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
Pyrene	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
Butylbenzylphthalate	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
Benzo(a)anthracene	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
bis(2-Ethylhexyl)phthalate	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
bis(2-Ethylhexyl)adipate	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
Chrysene	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
Di-n-octylphthalate	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
Benzo(b)fluoranthene	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
Benzo(k)fluoranthene	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
Benzo(a)pyrene	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
Dibenzo(a,h)anthracene	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
Indeno(1,2,3-cd)pyrene	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
Benzo(g,h,i)perylene	ND(2)	ND(2)	ND(0.2)	ug/L	28-SEP-00
Semivolatle Compounds, Base/Neutral 625 Scan					
Scan Control Complete	Complete	Complete			28-SEP-00
No Compounds Detected	ND(2)	Unavail	ND(0.2)	ug/L	28-SEP-00

Status: **Pass**

Reviewer: _____ Date: _____

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All work performed at NSF International, 789 Dixboro Ann Arbor, MI 48105

References to Testing Procedures:

<u>Parameter/Test Description</u>	<u>NSF Reference</u>
Additives Sample Preparation Information (Std. 60)	-E11ADINFO
Antimony in Drinking Water by ICP/MS (Ref: EPA-200.8)	-I3SB041
Arsenic in Drinking Water by ICP/MS (Ref: EPA-200.8)	-I3AS041
Barium in Drinking Water by ICP/MS (Ref: EPA-200.8)	-I3BA041
Beryllium in Drinking Water by ICP/MS (Ref: EPA-200.8)	-I3BE041
Cadmium in Drinking Water by ICP/MS (Ref: EPA-200.8)	-I3CD041
Chromium in Drinking Water by ICP/MS (Ref: EPA-200.8)	-I3CR041
Copper in Drinking Water by ICP/MS (Ref: EPA-200.8)	-I3CU041
Lead in Drinking Water by ICP/MS (Ref: EPA-200.8)	-I3PB041
Mercury in Drinking Water by ICP/MS (Ref: EPA-200.8)	-I3HG041
Selenium in Drinking Water by ICP/MS (Ref: EPA-200.8)	-I3SE041
Semivolatile Compounds, Base/Neutral 625	-O28065625
Semivolatile Compounds, Base/Neutral 625 Scan	-O28070625
Thallium in Drinking Water by ICP/MS (Ref: EPA-200.8)	-I3TL041

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