Ammonium Sulfate, Dry
Safety Data Sheet
According to U.S. Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations and according to Canada’s
Revision Date: 05/25/2017 Date of Issue: 05/22/2015 Version: 2.0

SECTION 1: IDENTIFICATION
Product Identifier
Product Form: Substance
Product Name: Ammonium Sulfate, Dry
CAS-No.: 7783-20-2
Formula: (NH₄)₂SO₄
Intended Use of the Product
Fertilizer Manufacture.
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
INTERNATIONAL: +1-703-741-5970
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
GHS Classification
Aquatic Acute 2 H401
Full text of hazard classes and H-statements : see section 16
Label Elements
GHS Labeling
Hazard Statements : H401 - Toxic to aquatic life
Precautionary Statements : P273 - Avoid release to the environment.
P501 - Dispose of contents/container in accordance with local, regional, national, provincial, territorial and international regulations.

Other Hazards
Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

Unknown acute toxicity
No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS
Substance
Name : Ammonium Sulfate, Dry
CAS-No. : 7783-20-2

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>%*</th>
<th>GHS Ingredient Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium sulfate</td>
<td>(CAS-No.) 7783-20-2</td>
<td>99 - 100</td>
<td>Aquatic Acute 2, H401</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16.
*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).

SECTION 4: FIRST AID MEASURES
Description of First-aid Measures
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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: None expected under normal conditions of use.

Inhalation: Prolonged exposure may cause irritation.

Skin Contact: None under normal conditions. Skin contact with large amounts of dust may cause mechanical irritation.

Eye Contact: None under normal use. Eye contact with dust may cause mechanical irritation.

Ingestion: Ingestion may cause 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.

Reactivity: Hazardous reactions will not occur under normal conditions.

Advice for Firefighters
Precautionary Measures Fire: Exercise caution when fighting any fire. Under fire conditions, hazardous fumes will be present.

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 ammonia, sulfur dioxide and/or sulfur trioxide at temperatures reported above 232°C (450°F).

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.

For Non-Emergency Personnel
Protective Equipment: Use appropriate personal protective equipment (PPE).


For Emergency Personnel
Protective Equipment: Equip cleanup crew with proper protection.


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

Methods and Materials for Containment and Cleaning Up
For Containment: Contain and collect as any solid.

Methods for Cleaning Up: Avoid generation of dust during clean-up of spills. Vacuum clean-up is preferred. If sweeping is required use a dust suppressant.

Reference to Other Sections
See Heading 8. Exposure controls and personal protection. See Section 13, Disposal Considerations.
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SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling
Additional Hazards When Processed: This product may cake under the influence of moisture; protect from moisture.
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 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 extremely high or low temperatures, moisture and incompatible materials.
Incompatible Materials: Strong bases, alkalies, alkalizing substances, nitrites and alkaline substances.

Specific End Use(s)
Fertilizer Manufacture.

SECTION 8: EXPOSURE CONTROLS/PERSEROAL 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), AIHA (WEEL), 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.

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.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties
Physical State: Solid
Appearance: Off-White
Odor: Slight Ammoniacal
Odor Threshold: Not available
pH: 4.9 - 5.9 (Conc. (% w/w): 40%)
Evaporation Rate: Not available
Melting Point: Not available
Freezing Point: Not applicable
Boiling Point: Not applicable
Flash Point: Not applicable
Auto-ignition Temperature: Not available
Decomposition Temperature: 280 °C (536 °F)
Flammability (solid, gas): Not flammable
Lower Flammable Limit: Not available
Upper Flammable Limit: Not available
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<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Vapor Pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative Vapor Density at 20°C</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.766</td>
</tr>
<tr>
<td>Solubility</td>
<td>Water: 42.3%(w/w) @ 0°C, 46.3%(w/w) @ 50°C, 49.9%(w/w) @ 100°C</td>
</tr>
<tr>
<td>Partition Coefficient: N-Octanol/Water</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
</tbody>
</table>

**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:** Extremely high or low temperatures, incompatible materials, moisture.
- **Incompatible Materials:** Strong bases, alkalies, alkalizing substances, nitrites and alkaline substances.
- **Hazardous Decomposition Products:** The decomposition products are corrosive and hazardous to health. Forms ammonia, sulfur dioxide and/or sulfur trioxide at temperatures reported above 232°C (450°F).

**SECTION 11: TOXICOLOGICAL INFORMATION**

- **Information on Toxicological Effects - Product**
  - Acute Toxicity (Oral): Not classified
  - Acute Toxicity (Dermal): Not classified
  - Acute Toxicity (Inhalation): Not classified
- **LD50 and LC50 Data:** Not available
- **Skin Corrosion/Irritation:** Not classified
- **pH:** 4.9 - 5.9 (Conc. (% w/w): 40%)
- **Eye Damage/Irritation:** Not classified
- **pH:** 4.9 - 5.9 (Conc. (% w/w): 40%)
- **Respiratory or Skin Sensitization:** Not classified
- **Germ Cell Mutagenicity:** 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/Effects After Inhalation:** Prolonged exposure may cause irritation.
- **Symptoms/Effects After Skin Contact:** None under normal conditions. Skin contact with large amounts of dust may cause mechanical irritation.
- **Symptoms/Effects After Eye Contact:** None under normal use. Eye contact with dust may cause mechanical irritation.
- **Symptoms/Effects After Ingestion:** Ingestion may cause adverse effects.
- **Chronic Symptoms:** None expected under normal conditions of use.

**Information on Toxicological Effects - Ingredient(s)**

<table>
<thead>
<tr>
<th>LD50 and LC50 Data:</th>
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</thead>
<tbody>
<tr>
<td>Ammonium sulfate (7783-20-2)</td>
</tr>
<tr>
<td>LD50 Oral Rat</td>
</tr>
</tbody>
</table>

**SECTION 12: ECOLOGICAL INFORMATION**

- **Toxicity**
  - **Ecology - General:** Harmful to aquatic life.

<table>
<thead>
<tr>
<th><strong>Ammonium sulfate (7783-20-2)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 Fish 1</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
</tr>
<tr>
<td>LC50 Fish 2</td>
</tr>
</tbody>
</table>
**Persistence and Degradability**  Not available

**Bioaccumulative Potential**

<table>
<thead>
<tr>
<th>Chemical Name (CAS No.)</th>
<th>CERCLA RQ</th>
<th>EPCRA 304 RQ</th>
<th>SARA 302 TPQ</th>
<th>SARA 313</th>
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<tbody>
<tr>
<td>Ammonium sulfate (7783-20-2)</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>No</td>
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</tbody>
</table>

**Mobility in Soil**  Not available

**Other Adverse Effects**

**Other Information:** Avoid release to the environment.

**SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste Disposal Recommendations:** Dispose of in accordance with applicable local, state, provincial, territorial, federal and international regulations.

**Ecology - Waste Materials:** Avoid release to the environment.

**SECTION 14: TRANSPORT INFORMATION**

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

Not regulated for transport according to: US DOT, IMDG, IATA, and Canada’s TDG.

**SECTION 15: REGULATORY INFORMATION**

**US Federal Regulations**

<table>
<thead>
<tr>
<th>Chemical Name (CAS No.)</th>
<th>CERCLA RQ</th>
<th>EPCRA 304 RQ</th>
<th>SARA 302 TPQ</th>
<th>SARA 313</th>
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</thead>
<tbody>
<tr>
<td>Ammonium sulfate (7783-20-2)</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>No</td>
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</table>

SARA 311/312
Not present

**US TSCA Flags**
Not present

**US State Regulations**

**California Proposition 65**

<table>
<thead>
<tr>
<th>Chemical Name (CAS No.)</th>
<th>Carcinogenicity</th>
<th>Developmental Toxicity</th>
<th>Female Reproductive Toxicity</th>
<th>Male Reproductive Toxicity</th>
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<tbody>
<tr>
<td>Ammonium sulfate (7783-20-2)</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
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</tbody>
</table>

**State Right-To-Know Lists**

**Ammonium sulfate (7783-20-2)**

- U.S. - Massachusetts - Right To Know List - Yes
- U.S. - New Jersey - Right to Know Hazardous Substance List - No
- U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List - Yes
- U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances - No
- U.S. - Pennsylvania - RTK (Right to Know) List - Yes

**Canadian Regulations**

**Ammonium sulfate (7783-20-2)**

Listed on the Canadian DSL (Domestic Substances List)
Not listed on the Canadian NDSL (Non-Domestic Substances List)

**International Inventories/Lists**

<table>
<thead>
<tr>
<th>Chemical Name (CAS No.)</th>
<th>Australia AICS</th>
<th>Turkey CICR</th>
<th>Korea ECL</th>
<th>EU EINECS</th>
<th>EU ELINCS</th>
<th>EU SVHC</th>
<th>EU NLP</th>
<th>Mexico INSQ</th>
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<tbody>
<tr>
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<td>Yes</td>
<td>Yes</td>
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<td>No</td>
<td>No</td>
<td>No</td>
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</table>
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Chemical Name (CAS No.)

<table>
<thead>
<tr>
<th>Chemical Name (CAS No.)</th>
<th>China IECSC</th>
<th>Japan ENCS</th>
<th>Japan ISHL</th>
<th>Japan PDSCL</th>
<th>Japan PRTR</th>
<th>Philippines PICCS</th>
<th>New Zealand NZIOC</th>
<th>US TSCA</th>
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</thead>
<tbody>
<tr>
<td>Ammonium sulfate (7783-20-2)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of Preparation or Latest Revision: 05/25/2017

Revision Summary

<table>
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<tr>
<th>Section</th>
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<th>Date Changed</th>
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<td>16</td>
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<td>05/25/2017</td>
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</tbody>
</table>

Other Information: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada’s Hazardous Products Regulations (HPR).

GHS Full Text Phrases:

Aquatic Acute 3: Hazardous to the aquatic environment - Acute Hazard Category 3
H401: Toxic to aquatic life

NFPA 704

NFPA Health Hazard: 1 - Materials that, under emergency conditions, can cause significant irritation.
NFPA Fire Hazard: 0 - Materials that will not burn under typical dire conditions.
NFPA Reactivity Hazard: 0 - Material that in themselves are normally stable, even under fire conditions.

HMIS Rating

Health: 1 Slight Hazard - Irritation or minor reversible injury possible
Flammability: 0 Minimal Hazard
Physical: 0 Minimal Hazard
PPE: See Section 8

Abbreviations and Acronyms

AICS – Australian Inventory of Chemical Substances
ACGIH – American Conference of Governmental Industrial Hygienists
AIHA – American Industrial Hygiene Association
ATE – Acute Toxicity Estimate
BCF - Bioconcentration factor
BEI - Biological Exposure Indices (BEI)
CAS No. - Chemical Abstracts Service number
CERCLA RQ - Comprehensive Environmental Response, Compensation, and Liability Act - Reportable Quantity
CICR - Turkish Inventory and Control of Chemicals
EC50 - Median effective concentration
ECL - Korea Existing Chemicals List
EINECS - European Inventory of Existing Commercial Chemical Substances
ELINCS - European List of Notified Chemical Substances
EmS - IMDG Emergency Schedule Fire & Spillage
ENCs - Japanese Existing and New Chemical Substances Inventory
EPA – Environmental Protection Agency
EPCRA 304 RQ – EPCRA 304 Extremely Hazardous Substance Emergency
EC50 - Median effective concentration
LD50 - Median Lethal Dose
LOAEL - Lowest Observed Adverse Effect Level
LOEC - Lowest-observed-effect Concentration
Log Pow - Octanol/water Partition Coefficient
LC50 - Median Lethal Concentration
NOAEL - No-Observed Adverse Effect Level
NOEC - No-Observed Effect Concentration
NOSHA - National Institute for Occupational Safety and Health
NLP - Europe No Longer Polymers List
NOSHA - Occupational Safety and Health Administration
OEL - Occupational Exposure Limits
OSHA – Occupational Safety and Health Administration
PEL - Permissible Exposure Limits
PRTR - Japan Pollutant Release and Transfer Register
REL - Recommended Exposure Limit
PICCS - Philippine Inventory of Chemicals and Chemical Substances
PSDCL - Japan Poisonous and Deleterious Substances Control Law
PPE – Personal Protective Equipment
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™.