

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 Hazardous Products Regulation, February 11, 2015.

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).

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 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/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), 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.

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



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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Vapor Pressure	: Not available
Relative Vapor Density at 20°C	: Not available
Specific Gravity	: 1.766
Solubility	: Water: 42.3%(w/w) @ 0°C, 46.3%(w/w) @ 50°C, 49.9%(w/w) @ 100°C
Partition Coefficient: N-Octanol/Water	: Not available
Viscosity	: Not available

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, alkalis, alkalinizing 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)

LD50 and LC50 Data:

Ammonium sulfate (7783-20-2)	
LD50 Oral Rat	> 2000 mg/kg

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Ecology - General: Harmful 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)
LC50 Fish 2	32.2 (32.2 - 41.9) mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])

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Persistence and Degradability Not available

Bioaccumulative Potential

Ammonium sulfate (7783-20-2)	
Log Pow	-5.1 (at 25 °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 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

Chemical Name (CAS No.)	CERCLA RQ	EPCRA 304 RQ	SARA 302 TPQ	SARA 313
Ammonium sulfate (7783-20-2)	Not applicable	Not applicable	Not applicable	No

SARA 311/312

Not present

US TSCA Flags

Not present

US State Regulations

California Proposition 65

Chemical Name (CAS No.)	Carcinogenicity	Developmental Toxicity	Female Reproductive Toxicity	Male Reproductive Toxicity
Ammonium sulfate (7783-20-2)	No	No	No	No

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 NDSDL (Non-Domestic Substances List)

International Inventories/Lists

Chemical Name (CAS No.)	Australia AICS	Turkey CICR	Korea ECL	EU EINECS	EU ELINCS	EU SVHC	EU NLP	Mexico INSQ
Ammonium sulfate (7783-20-2)	Yes	Yes	Yes	Yes	No	No	No	Yes

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Chemical Name (CAS No.)	China IECSC	Japan ENCS	Japan ISHL	Japan PDSCCL	Japan PRTR	Philippines PICCS	New Zealand NZIOC	US TSCA
Ammonium sulfate (7783-20-2)	Yes	Yes	Yes	No	No	Yes	Yes	Yes

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

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

Revision Summary

Section	Change	Date Changed
4	Language modified	05/25/2017
5	Language modified	05/25/2017
6	Language modified	05/25/2017
7	Language modified	05/25/2017
11	Data modified	05/25/2017
13	Language modified	05/25/2017
16	Language modified	05/25/2017

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:

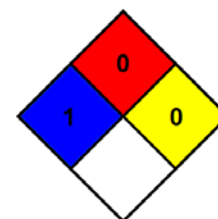
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
H401	Toxic to aquatic life

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	LC50 - Median Lethal Concentration
ACGIH - American Conference of Governmental Industrial Hygienists	LD50 - Median Lethal Dose
AIHA - American Industrial Hygiene Association	LOAEL - Lowest Observed Adverse Effect Level
ATE - Acute Toxicity Estimate	LOEC - Lowest-observed-effect Concentration
BCF - Bioconcentration factor	Log Pow - Octanol/water Partition Coefficient
BEI - Biological Exposure Indices (BEI)	NFPA 704 - National Fire Protection Association - Standard System for the Identification of the Hazards of Materials for Emergency Response
CAS No. - Chemical Abstracts Service number	NIOSH - National Institute for Occupational Safety and Health
CERCLA RQ - Comprehensive Environmental Response, Compensation, and Liability Act - Reportable Quantity	NLP - Europe No Longer Polymers List
CICR - Turkish Inventory and Control of Chemicals	NOAEL - No-Observed Adverse Effect Level
DOT - 49 CFR - US Department of Transportation - Code of Federal Regulations Title 49 - Transportation.	NOEC - No-Observed Effect Concentration
EC50 - Median effective concentration	NZIOC - New Zealand Inventory of Chemicals
ECL - Korea Existing Chemicals List	OEL - Occupational Exposure Limits
EINECS - European Inventory of Existing Commercial Chemical Substances	OSHA - Occupational Safety and Health Administration
ELINCS - European List of Notified Chemical Substances	PEL - Permissible Exposure Limits
EmS - IMDG Emergency Schedule Fire & Spillage	PICCS - Philippine Inventory of Chemicals and Chemical Substances
ENCS - Japanese Existing and New Chemical Substances Inventory	PDSCCL - Japan Poisonous and Deleterious Substances Control Law
EPA - Environmental Protection Agency	PPE - Personal Protective Equipment
EPCRA 304 RQ - EPCRA 304 Extremely Hazardous Substance Emergency	PRTR - Japan Pollutant Release and Transfer Register
	REL - Recommended Exposure Limit

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Planning and Community Right-to-Know-Act – Reportable Quantity	SADT - Self Accelerating Decomposition Temperature
ERAP Index – Emergency Response Assistance Plan Quantity Limit	SARA - Superfund Amendments and Reauthorization Act
ErC50 - EC50 in Terms of Reduction Growth Rate	SARA 302 - Section 302, 40 CFR Part 355
ERG code (IATA) - Emergency Response Drill Code as found in the International Civil Aviation Organization (ICAO)	SARA 311/312 - Sections 311 and 312, 40 CFR Part 370 Hazard Categories
ERG No. - Emergency Response Guide Number	SARA 313 - Section 313, 40 CFR Part 372
HCCL - Hazard Communication Carcinogen List	SRCL - Specifically Regulated Carcinogen List
HMIS – Hazardous Materials Information System	STEL - Short Term Exposure Limit
IARC - International Agency for Research on Cancer	SVHC – European Candidate List of Substance of Very High Concern
IATA - International Air Transport Association – Dangerous Goods Regulations	TDG – Transport Canada Transport of Dangerous Goods Regulations
IDLH - Immediately Dangerous to Life or Health	TLM - Median Tolerance Limit
IECSC - Inventory of Existing Chemical Substances Produced or Imported in China	TLV - Threshold Limit Value
IMDG - International Maritime Dangerous Goods Code	TPQ - Threshold Planning Quantity
INSQ - Mexican National Inventory of Chemical Substances	TSCA – United States Toxic Substances Control Act
ISHL - Japan Industrial Safety and Health Law	TWA - Time Weighted Average
	WEEL - Workplace Environmental Exposure Levels

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™.



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