

# SAFETY DATA SHEET

According to US Regulation 29 CFR 1910.1200 (HazCom 2012)

## 1. Identification

**Product identifier:** Ammonium Sulfate

### Other means of identification

**Product No.:** 0792, 0793, 0795, 0798, 0800, 3496, 3512, 3514, 3523, 4027, 4628, 7725

### Recommended restrictions

**Recommended use:** For Laboratory, Research or Manufacturing Use.

**Restrictions on use:** Not determined.

### Details of the supplier of the safety data sheet

**Company Name:** Avantor Performance Materials, LLC  
**Address:** 100 Matsonford Rd, Suite 200  
Radnor, PA 19087

**Telephone:** Customer Service: 855-282-6867

**Contact Person:** Product Information Compliance  
**E-mail:** info@avantormaterials.com

### Emergency telephone number:

CHEMTREC: 1-800-424-9300 within US and Canada (24 hrs/day, 7 days/week)

## 2. Hazard(s) identification

### Hazard Classification

#### Health Hazards

Specific Target Organ Toxicity - Single Exposure Category 2<sup>1</sup>.

#### Target Organs

1. Central nervous system

#### Unknown toxicity - Health

Acute toxicity, inhalation, dust or mist 100 %

### Label Elements

#### Hazard Symbol:



**Signal Word:** Warning

<b>Hazard Statement:</b>	May cause damage to organs by ingestion.
<b>Precautionary Statements</b>	
<b>Prevention:</b>	Do not breathe dust. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.
<b>Response:</b>	IF exposed or if you feel unwell: Call a POISON CENTER or doctor.
<b>Storage:</b>	Store locked up.
<b>Disposal:</b>	Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
<b>Hazard(s) not otherwise classified (HNOC):</b>	None.

### 3. Composition/information on ingredients

#### Substances

Chemical Identity	CAS number	Content in percent (%)*
Ammonium sulfate	7783-20-2	99.0 - 100.0%

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

### 4. First-aid measures

<b>General information:</b>	Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.
<b>Ingestion:</b>	Rinse mouth thoroughly. Get medical attention if symptoms occur. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
<b>Inhalation:</b>	Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.
<b>Skin Contact:</b>	Wash skin thoroughly with soap and water. Get medical attention if irritation persists after washing.
<b>Eye contact:</b>	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if symptoms occur.

#### Most important symptoms/effects, acute and delayed

<b>Symptoms:</b>	Irritating to eyes, respiratory system and skin.
<b>Hazards:</b>	None known.

#### Indication of immediate medical attention and special treatment needed

<b>Treatment:</b>	Treat symptomatically. Symptoms may be delayed.
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### 5. Fire-fighting measures

**General Fire Hazards:** The product is non-combustible.

**Suitable (and unsuitable) extinguishing media**

**Suitable extinguishing media:** Use fire-extinguishing media appropriate for surrounding materials.

**Unsuitable extinguishing media:** None known.

**Specific hazards arising from the chemical:** During fire, gases hazardous to health may be formed.

**Special protective equipment and precautions for firefighters**

**Special fire fighting procedures:** Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out.

**Special protective equipment for fire-fighters:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

**6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:** Keep unauthorized personnel away. Keep upwind. Ventilate closed spaces before entering them. Avoid inhalation of dust. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

**Methods and material for containment and cleaning up:** Sweep up and place in a clearly labeled container for chemical waste. Clean surface thoroughly to remove residual contamination.

**Notification Procedures:** Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.

**Environmental Precautions:** Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

**7. Handling and storage**

**Precautions for safe handling:** Avoid conditions which create dust. Avoid inhalation of dust. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Do not eat, drink or smoke when using the product. Use only with adequate ventilation. Wash thoroughly after handling. See Section 8 of the SDS for Personal Protective Equipment.

**Conditions for safe storage, including any incompatibilities:** Keep containers tightly closed. Store in a well-ventilated place.

**8. Exposure controls/personal protection**

**Control Parameters**

**Occupational Exposure Limits**

None of the components have assigned exposure limits.

**Appropriate Engineering Controls**

Provide sufficient ventilation for operations causing dust formation.

## Individual protection measures, such as personal protective equipment

<b>General information:</b>	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area.
<b>Eye/face protection:</b>	Wear safety glasses with side shields (or goggles). Use tight fitting goggles if dust is generated.
<b>Skin Protection</b>	
<b>Hand Protection:</b>	Chemical resistant gloves
<b>Other:</b>	Wear appropriate clothing to prevent repeated or prolonged skin contact.
<b>Respiratory Protection:</b>	In case of inadequate ventilation use suitable respirator. Air-purifying respirator with a high efficiency particulate filter.
<b>Hygiene measures:</b>	Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Avoid contact with eyes, skin, and clothing.

## 9. Physical and chemical properties

### Appearance

<b>Physical state:</b>	Solid
<b>Form:</b>	Crystals or powder.
<b>Color:</b>	White
<b>Odor:</b>	Odorless
<b>Odor threshold:</b>	No data available.
<b>pH:</b>	5.5 (13.21 g/l, 20 °C) 5.0 - 6.0 (25 °C) (5% aqueous solution)
<b>Melting point/freezing point:</b>	235 °C
<b>Initial boiling point and boiling range:</b>	No data available.
<b>Flash Point:</b>	Not applicable
<b>Evaporation rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	No data available.
<b>Upper/lower limit on flammability or explosive limits</b>	
<b>Flammability limit - upper (%):</b>	No data available.
<b>Flammability limit - lower (%):</b>	No data available.
<b>Explosive limit - upper (%):</b>	No data available.
<b>Explosive limit - lower (%):</b>	No data available.
<b>Vapor pressure:</b>	2.57 kPa (25 °C) 4.47 kPa (35 °C)
<b>Vapor density:</b>	No data available.
<b>Density:</b>	1.77 g/ml (20 °C)
<b>Relative density:</b>	1.77 (20 °C)
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	706 g/l (0 °C) 744 g/l (20 °C) 767 g/l (25 °C) 1,038 g/l (100 °C)
<b>Solubility (other):</b>	acetone: Practically insoluble

<b>Partition coefficient (n-octanol/water):</b>	1.66
<b>Auto-ignition temperature:</b>	No data available.
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.

**Other information**

<b>Bulk density:</b>	1,060 - 1,100 kg/m <sup>3</sup>
<b>Molecular weight:</b>	132.14 g/mol ((NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> )

**10. Stability and reactivity**

<b>Reactivity:</b>	No dangerous reaction known under conditions of normal use.
<b>Chemical Stability:</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid:</b>	Excessive heat. Contact with incompatible materials.
<b>Incompatible Materials:</b>	Strong oxidizing agents. Potassium. Nitrates.
<b>Hazardous Decomposition Products:</b>	Ammonia. Oxides of sulfur. Thermal decomposition may produce oxides of nitrogen.

**11. Toxicological information**

**Information on likely routes of exposure**

<b>Inhalation:</b>	May cause irritation to the respiratory system.
<b>Skin Contact:</b>	Prolonged skin contact may cause temporary irritation.
<b>Eye contact:</b>	May cause temporary eye irritation.
<b>Ingestion:</b>	May cause irritation of the gastrointestinal tract.

**Information on toxicological effects**

**Acute toxicity (list all possible routes of exposure)**

<b>Oral Product:</b>	LD 50 (Rat): 4,250 mg/kg
<b>Dermal Product:</b>	LD 50 (Rat) > 2,000 mg/kg
<b>Inhalation Product:</b>	No data available.

<b>Repeated dose toxicity Product:</b>	No data available.
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<b>Skin Corrosion/Irritation Product:</b>	Prolonged skin contact may cause temporary irritation.
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**Serious Eye Damage/Eye Irritation**

**Product:** May cause temporary eye irritation.

**Respiratory or Skin Sensitization**

**Product:** Not a skin nor a respiratory sensitizer.

**Carcinogenicity**

**Product:** This substance has no evidence of carcinogenic properties.

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

No carcinogenic components identified

**US. National Toxicology Program (NTP) Report on Carcinogens:**

No carcinogenic components identified

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):**

No carcinogenic components identified

**Germ Cell Mutagenicity**

**In vitro**

**Product:** No mutagenic components identified

**In vivo**

**Product:** No mutagenic components identified

**Reproductive toxicity**

**Product:** No components toxic to reproduction

**Specific Target Organ Toxicity - Single Exposure**

**Product:** Central nervous system.

**Specific Target Organ Toxicity - Repeated Exposure**

**Product:** None known.

**Target Organs**

Specific Target Organ Toxicity - Single Exposure: Central nervous system

**Aspiration Hazard**

**Product:** Not classified

**Other effects:** None known.

**12. Ecological information**

**Ecotoxicity:**

**Acute hazards to the aquatic environment:**

**Fish**

**Product:** LC 50 (Atlantic Salmon, 96 h): 101.1 - 149.5 mg/l  
LC 50 (Zebra danio (Danio rerio), 96 h): 420 mg/l

**Aquatic Invertebrates**

**Product:** LC 50 (Water flea (Daphnia magna), 48 h): 129 mg/l

**Chronic hazards to the aquatic environment:**

**Fish**  
**Product:** No data available.

**Aquatic Invertebrates**  
**Product:** No data available.

**Toxicity to Aquatic Plants**  
**Product:** No data available.

**Persistence and Degradability**

**Biodegradation**  
**Product:** There are no data on the degradability of this product.

**BOD/COD Ratio**  
**Product:** No data available.

**Bioaccumulative potential**

**Bioconcentration Factor (BCF)**  
**Product:** No data available on bioaccumulation.

**Partition Coefficient n-octanol / water (log Kow)**

**Product:** Log Kow: 1.66

**Mobility in soil:** The product is water soluble and may spread in water systems.

**Other adverse effects:** The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

**13. Disposal considerations**

**Disposal instructions:** Discharge, treatment, or disposal may be subject to national, state, or local laws.

**Contaminated Packaging:** Since emptied containers retain product residue, follow label warnings even after container is emptied.

**14. Transport information**

**DOT**  
Not regulated.

**IMDG**  
Not regulated.

**IATA**  
Not regulated.

**15. Regulatory information**

**US Federal Regulations**

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**  
None present or none present in regulated quantities.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**  
None present or none present in regulated quantities.

**CERCLA Hazardous Substance List (40 CFR 302.4):**

None present or none present in regulated quantities.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories**

Specific target organ toxicity (single or repeated exposure)

**SARA 302 Extremely Hazardous Substance**

None present or none present in regulated quantities.

**SARA 304 Emergency Release Notification**

None present or none present in regulated quantities.

**SARA 311/312 Hazardous Chemical**

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
Ammonium sulfate	10000 lbs.

**SARA 313 (TRI Reporting)**

<u>Chemical Identity</u>	<u>Reporting threshold for other users</u>	<u>Reporting threshold for manufacturing and processing</u>
Ammonium sulfate	10000 lbs.	25000 lbs.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):**

None present or none present in regulated quantities.

**Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3):**

None present or none present in regulated quantities.

**US State Regulations**

**US. California Proposition 65**

No ingredient requiring a warning under CA Prop 65.

**US. New Jersey Worker and Community Right-to-Know Act**

No ingredient regulated by NJ Right-to-Know Law present.

**US. Massachusetts RTK - Substance List**

<u>Chemical Identity</u>
Ammonium sulfate

**US. Pennsylvania RTK - Hazardous Substances**

<u>Chemical Identity</u>
Ammonium sulfate

**US. Rhode Island RTK**

<u>Chemical Identity</u>
Ammonium sulfate

**International regulations**

**Montreal protocol**

Not applicable

**Stockholm convention**

Not applicable

**Rotterdam convention**

Not applicable



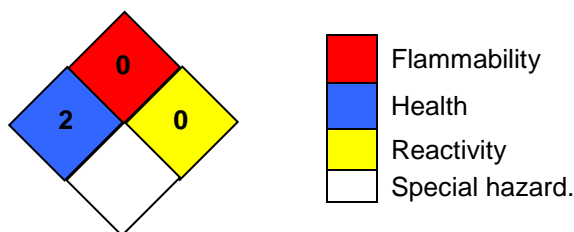
**Kyoto protocol**  
Not applicable

**Inventory Status:**

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
Japan ISHL Listing:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Mexico INSQ:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Philippines PICCS:	On or in compliance with the inventory
Taiwan Chemical Substance Inventory:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory

**16. Other information, including date of preparation or last revision**

**NFPA Hazard ID**



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

<b>Issue Date:</b>	03-03-2021
<b>Revision Information:</b>	Not relevant.
<b>Version #:</b>	2.6
<b>Source of information:</b>	Sources of information used in preparing this SDS included one or more of the following: results from in house or supplier toxicology studies, information from the Toxicology Data Network (TOXNET), European Chemical Agency (ECHA) substance dossiers, IARC Monographs, US National Toxicology Program data, the Agency for Toxic Substances and Disease Registry, other manufacturer's SDSs and other sources, as appropriate.
<b>Further Information:</b>	No data available.

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