

<b>AUTHOR:</b> Product Stewardship Committee	<b>EFF. DATE</b> 08-12-96	<b>FILE NAME</b> AMONASUL.MSD
<b>APPROVAL:</b> Charles Jones Director Environmental Affairs		<b>REVISION</b> 0

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**SLOSS INDUSTRIES CORPORATION  
MATERIAL SAFETY DATA SHEET  
AMMONIUM SULFATE**

**1. MATERIAL IDENTIFICATION**

**Manufacturer:** Sloss Industries Corporation  
3500 35th Avenue North  
Birmingham, Alabama 35207

**Phone numbers:** Product information: 205/808-7915  
8:00 AM to 4:30 PM Monday thru Friday  
24Hr Contact: 205/808-7846  
Transport Emergencies, Call CHEMTREC: 1/800/424-9300

**DOT number:** Not regulated

**Shipping Name:** Ammonium sulfate

**Product Name:** Ammonium sulfate

**CAS name:** Ammonium sulfate

**CAS number:** 7783-20-2

**Formula:**  $(\text{NH}_4)_2 \text{SO}_4$

**NFPA rating:** Health 1; Flammability 0; Reactivity 0

**HMIS rating:** Health 1; Flammability 0; Reactivity 1; Personal Protection F

**Trade names/  
Synonyms:** Diammonium Sulfate

**2. COMPONENTS**

<u>Material</u>	<u>CAS#</u>	<u>% by wt.</u>
Ammonium Sulfate	7783-20-2	100

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**3. PHYSICAL DATA**

**EMERGENCY OVERVIEW**

**Pugent, white to brownish-gray accicular crystals or granules with no odor or a slight odor of ammonia. May cause respiratory tract, skin and eye irritation. Avoid breathing dust. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Use only with adequate ventilation.**

**POTENTIAL HEALTH EFFECTS:**

**INHALATION:**

**SHORT TERM EFFECTS:** May cause irritation. Additional effects may include coughing, shortness of breath, asthma and lung congestion.

**LONG TERM EFFECTS:** No information is available.

**SKIN CONTACT:**

**SHORT TERM EFFECTS:** May cause irritation.

**LONG TERM EFFECTS:** Same effects as short term exposure.

**EYE CONTACT:**

**SHORT TERM EFFECTS:** May cause irritation.

**LONG TERM EFFECTS:** Same effects as short term exposure.

**INGESTION:**

**SHORT TERM EFFECTS:** May cause gastrointestinal irritation. Additional effects may include sore throat, nausea, vomiting, diarrhea and stomach pain.

**LONG TERM EFFECTS:** No information is available.

**Carcinogenicity:**

None of the components of this material are listed by NTP, OSHA, or IARC as a carcinogen or suspected carcinogen.

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**4. FIRST AID**

**INHALATION:**

Remove from exposure area to fresh air immediately. Treat symptomatically and supportively as needed. Get medical attention immediately if needed.

**SKIN CONTACT:**

Remove contaminated clothing and shoes immediately. Wash with soap or mild detergent and large amounts of water.

**EYE CONTACT:**

Wash eyes immediately with large amounts of water or normal saline, occasionally lifting upper and lower lids, until no evidence of chemical remains (at least 20 minutes). Get medical attention if necessary.

**INGESTION:**

If vomiting occurs, keep head lower than hips to help prevent aspiration. Treat symptomatically and supportively. Get medical attention if needed.

**Note to Physician:**

Antidote: No specific antidote. Treat symptomatically and supportively.

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**5. FIRE AND EXPLOSION DATA****Fire and Explosion Hazard:**

Negligible fire hazard when exposed to heat or flame.

**Extinguishing Media:**Extinguish using agent suitable for type of surrounding fire. (H<sub>2</sub>O, CO<sub>2</sub>, Foam, Dry Chemical)**Flash Point:** N/A**Lower Flammable Limit:** N/A**Upper Explosive Limit:** Not Applicable**Autoignition:** N/A**Hazardous Combustion Products:**

Thermal decomposition products may include toxic and corrosive fumes of ammonia, and toxic oxides of nitrogen and sulfur.

**6. ACCIDENTAL RELEASE MEASURES**

If spill occurs, sweep up with a minimum of dust and place into suitable clean, dry containers for reclamation or later disposal.

**7. HANDLING AND STORAGE**

Observe all federal, state and local regulation when storing this substance.

Protect containers from physical damage. Separate from strong oxidizers such as chlorates, nitrates, and nitrites (NFPA 49, Hazardous Chemicals Data, 1975).

Store in a cool, dry place.

Store away from incompatible substances.

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Exposure Limits: OSHA PEL (Nuisance Dust):

- (1) Respirable fraction: 5 mg.
- (2) Total dust: 15 mg.
- (3) ACGIH TLV: 10mg/m<sup>3</sup>

Use adequate ventilation to keep airborne concentration below exposure limits. If adequate ventilation cannot be used to keep levels below the exposure limits or irritation is experienced, use a NIOSH/MSHA approved half mask dust/mist respirator, wear long-sleeved loose fitting clothing closed at neck and wrists, gloves, and approved safety glasses or goggles.

Provide local exhaust ventilation system.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Description: White to brownish-gray accicular crystals or granules with no odor or a slight pungent odor.

Molecular Weight: 132.13

Molecular Formula: (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>

Boiling Point: Not applicable

Melting point: >455 F (>235 C) decomposes

Vapor pressure: Not Applicable      Bulk Density: 65.0

Vapor density: >1

Specific gravity: 1.769 @ 50°C

Water solubility: 71 gm/100cc @ 0°C \ 103.8 gm/100cc @ 100°C

pH: 5.5 @ 0.1 M soln

Solvent solubility: Insoluble in alcohol, acetone, liquid ammonia.

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**10. STABILITY AND REACTIVITY**

**Reactivity:**

Stable under normal temperatures and pressures.

Does not ignite readily, will decompose. Avoid contact with strong oxidizers, excessive heat, sparks, or open flame.

**Incompatibilities:**

**Ammonium Sulfate:**

Acids (strong): Incompatible.

Ammonium nitrate + Potassium or sodium-potassium alloy: May explode.

Bases: Possible vigorous reaction.

Chlorates: Fire and explosion hazard.

Chlorine: May explode.

Concrete: May corrode.

Copper and alloys: May corrode.

Nitrates: Fire and explosion hazard.

Oxidizers (strong): Fire and explosion hazard.

Potassium Chlorate: Decomposes with incandescence on heating.

Potassium Nitrate: Fire and explosion hazard.

Sodium Hypochlorite: May form explosive nitrogen trichloride.

Zinc: May corrode.

See also ammonium salts.

**Hazardous Decomposition:**

Thermal decomposition products may include toxic and corrosive fumes of ammonia, and toxic oxides of nitrogen and sulfur.

**Polymerization:**

Hazardous polymerization has not been reported to occur under normal temperatures and pressures.

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**11. TOXICOLOGICAL INFORMATION****Ammonium Sulfate:**

Toxicity Data: 1500 mg/kg oral-man TDL50; 2840 mg/kg oral rat LD50; 640 mg/kg oral mouse LD50; 3500 mg/kg oral-domestic animal LDLo; 610 mg/kg intraperitoneal-mouse LD50.

Carcinogen Status: None

Local Effects: Irritant - inhalation, skin, eyes

Acute Toxicity Level: Moderately toxic by ingestion

Target effects: No data available

At Increased Risk From Exposure: Persons with eye and skin disorders, allergies and respiratory conditions such as emphysema and asthma.

**Health Effects:**

**Inhalation - Ammonium Sulfate: Irritant**

Acute Exposure - May cause mild irritation of the respiratory system, sore throat, cough, shortness of breath, and symptoms of pulmonary edema which may be delayed. Ammonium sulfate causes histamine release in guinea pig lungs. Levels above 10 ug/m3 of suspended sulfates in the air may cause excess risk of asthmatic attacks in susceptible people.

Chronic Exposure - No data available.

**Skin Contact - Ammonium Sulfate: Irritant**

Acute Exposure - Direct contact may cause irritation with redness.

Chronic Exposure - Repeated or prolonged contact with irritants may cause dermatitis.

**Eye Contact - Ammonium Sulfate: Irritant**

Acute Exposure - Ingestion may cause irritation of the mouth, esophagus, and stomach, sore throat, abdominal pain, nausea, and vomiting. The sulfate ion may cause diarrhea.

Chronic Exposure - No data available.

**12. ECOLOGICAL INFORMATION**

None available.

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**13. DISPOSAL INFORMATION**

Observe all federal, state and local regulations when disposing of this substance.

**14. TRANSPORTATION INFORMATION**

Not DOT regulated.

**15. REGULATORY INFORMATION**

TSCA STATUS: Yes  
 CERCLA Section 103: No  
 SARA Section 302: No  
 SARA Section 304 : No  
 SARA Section 313: No  
 OSHA Process Safety: No  
 California Proposition 65: No

SARA Hazard Categories, SARA Sections 311/312:

Acute Hazard: Yes  
 Chronic Hazard: No  
 Fire Hazard: No  
 Reactivity Hazard: No  
 Sudden Release Hazard: No

**16. OTHER INFORMATION**

Section(s) revised: All revised to new format and to include most up to date information.  
 MSDS date: 12/20/95  
 Supersedes date: 1988

The data of this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material. While the data contained herein is based on technical data that Sloss Industries Corporation believes to be reliable, it is intended for use by persons having technical skill and at their own discretion and risk.