

# Material Safety Data Sheet

## Ammonium sulfate

ACC# 01410

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Ammonium sulfate

**Catalog Numbers:** AC205870000, AC205870010, AC423400000, AC423400010, AC423400030, AC423400050, AC423400250, AC423405000, S71915, S71915ACS, S75035, A701-3, A701-50, A702-10, A702-3, A702-500, A70250KG, A938-500, BP212-212, BP212R-1, NC9059074, NC9121878, NC9155259, NC9162615, NC9179991, NC9489144, NC9600600, NC9681931, NC9729549, NC9766751, NC9846135, NC9955809, XXA701210LB, XXA70225KG, XXA70250KG, XXBP21225KG, XXBP212PD25KG

**Synonyms:** Diammonium sulfate; Sulfuric acid, diammonium salt.

**Company Identification:**

Fisher Scientific  
1 Reagent Lane  
Fair Lawn, NJ 07410

**For information, call:** 201-796-7100

**Emergency Number:** 201-796-7100

**For CHEMTREC assistance, call:** 800-424-9300

**For International CHEMTREC assistance, call:** 703-527-3887

### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
7783-20-2	Ammonium sulfate	>99	231-984-1

**Hazard Symbols:** None listed.

**Risk Phrases:** None listed.

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: white solid. **Caution!** May cause eye, skin, and respiratory tract irritation.

**Target Organs:** Respiratory system, eyes, skin.

#### Potential Health Effects

**Eye:** May cause eye irritation. Causes redness and pain.

**Skin:** May cause skin irritation. May cause reddening of the skin.

**Ingestion:** May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

**Inhalation:** May cause respiratory tract irritation. May cause respiratory difficulty and coughing. It is generally not harmful to healthy persons if inhaled, but may contribute to asthma attacks or clearance problems in persons with these pre-existing pulmonary diseases

**Chronic:** Prolonged or repeated skin contact may cause dermatitis.

### Section 4 - First Aid Measures

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Skin:** Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

**Ingestion:** Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

**Inhalation:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

**Notes to Physician:** Treat symptomatically and supportively.

## Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Substance is noncombustible.

**Extinguishing Media:** Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not available.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 1; Flammability: 0; Instability: 0

## Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid breathing dust. Do not load or store together with sodium nitrite. Ammonium sulfate can react with sodium nitrite at temperatures as low as room temperature producing flames or even explosions. Ammonium sulfate has a weakly acid reaction. When alkaline substances are added, ammonia is liberated.

**Storage:** Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

## Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Ammonium sulfate	none listed	none listed	none listed

**OSHA Vacated PELs:** Ammonium sulfate: No OSHA Vacated PELs are listed for this chemical.

### Personal Protective Equipment

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

## Section 9 - Physical and Chemical Properties

**Physical State:** Solid

**Appearance:** white

**Odor:** odorless

**pH:** 5.5 (0.1M sol.)

**Vapor Pressure:** Not available.

**Vapor Density:** Not available.

**Evaporation Rate:** Negligible

**Viscosity:** Not applicable.

**Boiling Point:** Not applicable.

**Freezing/Melting Point:** 350 deg C (dec)

**Decomposition Temperature:** 235 deg C

**Solubility:** 43% at 20C.

**Specific Gravity/Density:** 1.77

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

**Molecular Weight:** 132.13

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Dust generation, excess heat.

**Incompatibilities with Other Materials:** Chlorates, nitrites, alkalis, Many metals, such as iron and zinc, are attacked by ammonium sulfate in the presence of moisture..

**Hazardous Decomposition Products:** Oxides of sulfur, nitrogen oxides (NO<sub>x</sub>) and ammonia (NH<sub>3</sub>).

**Hazardous Polymerization:** Will not occur.

## Section 11 - Toxicological Information

**RTECS#:**

**CAS#** 7783-20-2: BS4500000

**LD50/LC50:**

CAS# 7783-20-2:

Oral, mouse: LD50 = 640 mg/kg;

Oral, mouse: LD50 = 4280 mg/kg;

Oral, rat: LD50 = 2840 mg/kg;

Oral, rat: LD50 = 4540 mg/kg;

**Carcinogenicity:**

CAS# 7783-20-2: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

**Epidemiology:** No information available.

**Teratogenicity:** No information available.

**Reproductive Effects:** No information available.

**Neurotoxicity:** No information available.

**Mutagenicity:** No information available.

**Other Studies:** No data available.

## Section 12 - Ecological Information

**Ecotoxicity:** Water flea Daphnia: LC50 = 423 mg/L; 25 Hr; Unspecified

## Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.

**RCRA U-Series:** None listed.

## Section 14 - Transport Information

	US DOT	IATA	RID/ADR	IMO	Canada TDG
<b>Shipping Name:</b>	Not regulated				No information available.
<b>Hazard Class:</b>					
<b>UN Number:</b>					
<b>Packing Group:</b>					

## Section 15 - Regulatory Information

### US FEDERAL

#### TSCA

CAS# 7783-20-2 is listed on the TSCA inventory.

#### Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

#### Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

#### Section 12b

None of the chemicals are listed under TSCA Section 12b.

#### TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

#### **SARA**

#### **CERCLA Hazardous Substances and corresponding RQs**

None of the chemicals in this material have an RQ.

#### **SARA Section 302 Extremely Hazardous Substances**

None of the chemicals in this product have a TPQ.

#### **SARA Codes**

CAS # 7783-20-2: acute.

#### **Section 313**

No chemicals are reportable under Section 313.

#### **Clean Air Act:**

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depletors. This material does not contain any Class 2 Ozone depletors.

#### **Clean Water Act:**

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

#### **OSHA:**

None of the chemicals in this product are considered highly hazardous by OSHA.

#### **STATE**

CAS# 7783-20-2 can be found on the following state right to know lists: New Jersey, Pennsylvania, Massachusetts.

California No Significant Risk Level: None of the chemicals in this product are listed.

### **European/International Regulations**

#### **European Labeling in Accordance with EC Directives**

#### **Hazard Symbols:**

Not available.

#### **Risk Phrases:**

#### **Safety Phrases:**

S 24/25 Avoid contact with skin and eyes.

#### **WGK (Water Danger/Protection)**

CAS# 7783-20-2: 1

#### **Canada - DSL/NDSL**

CAS# 7783-20-2 is listed on Canada's DSL List.

#### **Canada - WHMIS**

This product does not have a WHMIS classification.

#### **Canadian Ingredient Disclosure List**

CAS# 7783-20-2 is listed on the Canadian Ingredient Disclosure List.

#### **Exposure Limits**

## Section 16 - Additional Information

**MSDS Creation Date:** 7/19/1999

**Revision #3 Date:** 3/31/2004

*The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.*