

SAFETY DATA SHEET

Creation Date 14-Oct-2009

Revision Date 18-Dec-2025

Revision Number 5

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200)

1. Identification

| | |
|---------------------|--|
| Product Name | Ammonium iron (II) sulfate hexahydrate |
| Cat No. : | I77-212; I77-500 |
| CAS No | 7783-85-9 |
| Synonyms | Ferrous ammonium sulfate; Mohr's salt |

Recommended Use
Uses advised against

Laboratory chemicals.
Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company

Fisher Scientific Company
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number

CHEMTRAC®, Inside the USA: 800-424-9300
CHEMTRAC®, Outside the USA: 001-703-527-3887

2. Hazard(s) identification

Classification

This chemical is considered hazardous according to [US] OSHA (29 CFR 1910.1200, 2024)

| | |
|--|------------|
| Skin Corrosion/Irritation | Category 2 |
| Serious Eye Damage/Eye Irritation | Category 2 |
| Specific target organ toxicity (single exposure) | Category 3 |
| Target Organs - Respiratory system. | |

Label Elements

Signal Word

Warning

Hazard Statements

Causes skin irritation
Causes serious eye irritation

May cause respiratory irritation



Precautionary Statements

Prevention

Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing
Call a POISON CENTER or doctor if you feel unwell

Skin

IF ON SKIN: Wash with plenty of soap and water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention

Storage

Store in a well-ventilated place. Keep container tightly closed
Store locked up

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None identified

Hazards classified under paragraph (d)(1)(ii) of 1910.1200

No information available

3. Composition/information on Ingredients

| Component | CAS No | Weight % |
|--|------------|----------|
| Ferrous ammonium sulfate.6H ₂ O | 7783-85-9 | >95 |
| Ferrous ammonium sulfate | 10045-89-3 | - |

4. First-aid measures

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. Get medical attention.

Inhalation

Remove to fresh air. Get medical attention. If not breathing, give artificial respiration.

Ingestion

Do NOT induce vomiting. Get medical attention.

Most important symptoms and effects

No information available.

Notes to Physician

Treat symptomatically

5. Fire-fighting measures

| | |
|---|---|
| Suitable Extinguishing Media | Substance is nonflammable; use agent most appropriate to extinguish surrounding fire. |
| Unsuitable Extinguishing Media | No information available |
| Flash Point | Not applicable |
| Method - | No information available |
| Autoignition Temperature | No information available |
| Explosion Limits | |
| Upper | No data available |
| Lower | No data available |
| Sensitivity to Mechanical Impact | No information available |
| Sensitivity to Static Discharge | No information available |

Specific Hazards Arising from the Chemical

Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.

Hazardous Combustion Products

Nitrogen oxides (NOx). Sulfur oxides. Heavy metal oxides.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

| Health | Flammability | Instability | Physical hazards |
|--------|--------------|-------------|------------------|
| 2 | 0 | 1 | N/A |

6. Accidental release measures

| | |
|----------------------------------|--|
| Personal Precautions | Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation. |
| Environmental Precautions | Avoid release to the environment. Should not be released into the environment. Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system. |

Methods for Containment and Clean Up Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

7. Handling and Storage

| | |
|-----------------|--|
| Handling | Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Avoid dust formation. |
| Storage. | Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from light. Store under an inert atmosphere. Incompatible Materials. Strong oxidizing agents. Strong acids. Strong bases. |

8. Exposure controls / personal protection

Exposure Guidelines

| Component | ACGIH TLV | OSHA PEL | NIOSH | Mexico OEL (TWA) |
|--|--------------------------|------------------------------------|---------------------------------|--------------------------|
| Ferrous ammonium sulfate.6H ₂ O | TWA: 1 mg/m ³ | (Vacated) TWA: 1 mg/m ³ | REL = 1 mg/m ³ (TWA) | TWA: 1 mg/m ³ |
| Ferrous ammonium sulfate | TWA: 1 mg/m ³ | (Vacated) TWA: 1 mg/m ³ | REL = 1 mg/m ³ (TWA) | TWA: 1 mg/m ³ |

Legend

ACGIH - American Conference of Governmental Industrial Hygienists
 OSHA - Occupational Safety and Health Administration
 NIOSH: NIOSH - National Institute for Occupational Safety and Health

Engineering Measures Ensure that eyewash stations and safety showers are close to the workstation location.
 Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

| | |
|---------------------------------|---|
| Eye/face Protection | 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 and body protection | Wear appropriate protective gloves and clothing to prevent skin exposure. |
| Respiratory Protection | No protective equipment is needed under normal use conditions. |
| Hygiene Measures | Handle in accordance with good industrial hygiene and safety practice. |

9. Physical and chemical properties

Appearance

| | | |
|--|--------------------------|--|
| Physical State | Solid | |
| Color | Light green | |
| Odor | Odorless | |
| Odor Threshold | No information available | |
| Property | Values | Remarks |
| Melting Point/Range | 100 °C / 212 °F | Method |
| Softening Point | No data available | |
| Boiling Point/Range | No information available | |
| Flash Point | Not applicable | Method - No information available |
| Flammability (liquid) | Not applicable | Solid |
| Flammability (solid,gas) | No information available | |
| Explosion Limits | No data available | |
| Autoignition Temperature | No data available | |
| Decomposition Temperature | 100 °C | |
| pH | 3,5 | (5 %) |
| Viscosity | Not applicable | Solid |
| Water Solubility | 269 g/L (20°C) | |
| Solubility in other solvents | No information available | |
| Partition Coefficient (n-octanol/water) | | |
| Vapor Pressure | No data available | |
| Density / Specific Gravity | No data available | |
| Bulk Density | No data available | |
| Vapor Density | Not applicable | |
| Particle characteristics | No data available | Solid |
| Other Information | | |
| Molecular Formula | H8 Fe N2 O8 S2 . 6 H2 O | |
| Molecular Weight | 392.14 | |
| Evaporation Rate | Not applicable - Solid | |

10. Stability and reactivity

| | |
|---|---|
| Reactive Hazard | None known, based on information available |
| Stability | Light sensitive. Air sensitive. |
| Conditions to Avoid | Incompatible products. Excess heat. Avoid dust formation. Exposure to air. Exposure to light. Temperatures above 100°C. |
| Incompatible Materials | Strong oxidizing agents, Strong acids, Strong bases |
| Hazardous Decomposition Products | Nitrogen oxides (NOx), Sulfur oxides, Heavy metal oxides |
| Hazardous Polymerization | Hazardous polymerization does not occur. |
| Hazardous Reactions | None under normal processing. |

11. Toxicological information

Information on expected route of exposure

| | |
|-------------------|--|
| Inhalation | Irritating to respiratory system. May be harmful if inhaled. |
| Ingestion | May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. |
| Eyes | Irritating to eyes. |
| Skin | Irritating to skin. May be harmful in contact with skin. |

Toxicology data for the components

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|--------------------------|---------------------------|-------------|-----------------|
| Ferrous ammonium sulfate | LD50 = 3250 mg/kg (Rat) | - | - |

Toxicologically Synergistic Products No information available

(b) skin corrosion/irritation; Category 2

(c) serious eye damage/irritation; Category 2

(d) respiratory or skin sensitization;

| | |
|-------------|-------------------|
| Respiratory | No data available |
| Skin | No data available |

(e) germ cell mutagenicity; No data available

(f) carcinogenicity;

The table below indicates whether each agency has listed any ingredient as a carcinogen

| Component | CAS No | IARC | NTP | ACGIH | OSHA | Mexico |
|--|------------|------------|------------|------------|------------|------------|
| Ferrous ammonium sulfate.6H ₂ O | 7783-85-9 | Not listed |
| Ferrous ammonium sulfate | 10045-89-3 | Not listed |

(g) reproductive toxicity; No data available

(h) STOT-single exposure; Category 3

| | |
|---|--|
| Results / Target organs | Respiratory system. |
| (i) STOT-repeated exposure; | No data available |
| Target Organs | No information available. |
| (j) aspiration hazard; | Not applicable Solid |
| Other Adverse Effects | The toxicological properties have not been fully investigated. |
| Symptoms / effects, both acute and delayed | No information available. |
| Other Adverse Effects | The toxicological properties have not been fully investigated. |
| Endocrine Disrupting Properties | This product does not contain any known or suspected endocrine disruptors. |

12. Ecological information

Ecotoxicity

Do not empty into drains. May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system.

Persistence and Degradability based on information available. May persist

Bioaccumulation/ Accumulation No information available.

Mobility Will likely be mobile in the environment due to its water solubility.

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT Not regulated

TDG Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. Regulatory Information

United States of America Inventory

| Component | CAS No | TSCA | TSCA Inventory notification - Active-Inactive | TSCA - EPA Regulatory Flags |
|-------------------------------|------------|------|---|-----------------------------|
| Ferrous ammonium sulfate.6H2O | 7783-85-9 | - | - | - |
| Ferrous ammonium sulfate | 10045-89-3 | X | ACTIVE | - |

Legend:

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

- - Not Listed

TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT) Not applicable

TSCA 12(b) - Notices of Export

Not applicable

International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

| Component | CAS No | DSL | NDSL | EINECS | PICCS | ENCS | ISHL | AICS | IECSC | KECL |
|--|------------|-----|------|-----------|-------|------|------|------|-------|----------|
| Ferrous ammonium sulfate.6H ₂ O | 7783-85-9 | - | - | - | X | X | X | X | X | - |
| Ferrous ammonium sulfate | 10045-89-3 | X | - | 233-151-8 | X | - | | X | X | KE-09802 |

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

U.S. Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Component | CAS No | Weight % | SARA 313 - Threshold Values % | SARA 313 - Reporting thresholds |
|--------------------------|------------|----------|-------------------------------|---------------------------------|
| Ferrous ammonium sulfate | 10045-89-3 | - | 1.0 % | - |

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

Not applicable

| Component | CWA - Hazardous Substances | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants |
|--------------------------|----------------------------|-----------------------------|------------------------|---------------------------|
| Ferrous ammonium sulfate | X | 1000 lb | - | - |

Clean Air Act

Not applicable

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

| Component | Hazardous Substances RQs | CERCLA Extremely Hazardous Substances RQs | SARA Reportable Quantity (RQ) |
|--------------------------|--------------------------|---|-------------------------------|
| Ferrous ammonium sulfate | 1000 lb | - | 1000 lb 454 kg |

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

| Component | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|--|---------------|------------|--------------|----------|--------------|
| Ferrous ammonium sulfate.6H ₂ O | - | - | X | - | X |
| Ferrous ammonium sulfate | X | X | X | - | X |

U.S. Department of Transportation

Reportable Quantity (RQ): N
 DOT Marine Pollutant N
 DOT Severe Marine Pollutant N

U.S. Department of Homeland Security This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

Authorisation/Restrictions according to EU REACH

| Component | CAS No | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|--|------------|---|---|---|
| Ferrous ammonium sulfate.6H ₂ O | 7783-85-9 | - | Use restricted. See entry 65. (see link for restriction details) | - |
| Ferrous ammonium sulfate | 10045-89-3 | - | Use restricted. See entry 65. (see link for restriction details) | - |

REACH links

<https://echa.europa.eu/substances-restricted-under-reach>

Safety, health and environmental regulations/legislation specific for the substance or mixture

| Component | CAS No | OECD HPV | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|--|------------|----------------|------------------------------|---------------------------|--|
| Ferrous ammonium sulfate.6H ₂ O | 7783-85-9 | Not applicable | Not applicable | Not applicable | Not applicable |
| Ferrous ammonium sulfate | 10045-89-3 | Not applicable | Not applicable | Not applicable | Not applicable |

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

Other International Regulations

| Component | CAS No | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|--|------------|---|--|----------------------------|------------------------------------|
| Ferrous ammonium sulfate.6H ₂ O | 7783-85-9 | Not applicable | Not applicable | Not applicable | Not applicable |
| Ferrous ammonium sulfate | 10045-89-3 | Not applicable | Not applicable | Not applicable | Not applicable |

16. Other Information

Prepared By

Product stewardship (Regulatory Affairs)

Thermo Fisher Scientific
email - begel.sdsdesk@thermofisher.com

| | |
|-------------------------|---|
| Creation Date | 14-Oct-2009 |
| Revision Date | 18-Dec-2025 |
| Print Date | 18-Dec-2025 |
| Revision Summary | Updated to the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) which published its Final Rule in the Federal Register revising the Hazard Communication Standard (HCS/HazCom), 29 CFR 1910.1200 (2024) (HCS §1910.1200, 2024), May 20, 2024, effective July 19, 2024. |

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS