

**Safety Data Sheet**

**1. IDENTIFICATION**

**Product Identifier:** Ferrous Ammonium Sulfate, Hexahydrate

**Product Code(s):** F1019

**Synonyms:** Ammonium Iron (II) Sulfate, Hexahydrate; Mohr's Salt

**Recommended Use:** For manufacturing, industrial, and laboratory use only. Use as a catalyst or as a laboratory solute.

**Uses Advised Against:** Not for food, drug, or household use.

**Supplier:** Rocky Mountain Reagents, Inc.  
4621 Technology Drive, Golden, CO 80403  
Phone: (303) 762-0800 Fax: (303) 762-1240

**Emergency Phone Number:** For health emergency call Poison Control: (800) 222-1222.

**2. HAZARDS IDENTIFICATION**

**Hazard Classifications:** Skin Corrosion/Irritation: Category 2  
Eye Damage/Irritation: Category 2A  
Specific Target Organ Toxicity (Single Exposure): Category 3

**Signal Word:** WARNING

**Hazard Statements:** Causes skin irritation.  
Causes serious eye irritation.  
May cause respiratory irritation.

**Pictograms:**



**Precautionary Statements:**

**Prevention:** Wash thoroughly after handling.  
Wear protective gloves, protective clothing, eye protection, and face protection.  
Avoid breathing dusts.  
Use only outdoors or in a well-ventilated area.

**Response:** If on skin: Wash with plenty of water. If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash it before reuse.  
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 attention.  
If inhaled: Remove person to fresh air and keep comfortable for breathing.  
Call a poison center or doctor if you feel unwell.

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

**Disposal:** Dispose of contents and container in accordance with local, regional, national, and international regulations.

**Hazards Not Otherwise Classified:** Not applicable.

**Toxicity Statement:** Not applicable.

### 3. COMPOSITION AND INFORMATION ON INGREDIENTS

Component	Common Name / Synonyms	CAS#	Chemical Formula	% by Weight
Ferrous Ammonium Sulfate, Hexahydrate	Mohr's Salt	7783-85-9	$\text{Fe}(\text{NH}_4)_2(\text{SO}_4)_2 \cdot 6\text{H}_2\text{O}$	98.5 – 101.5

**Trade Secret Statement:** Not applicable.

### 4. FIRST AID MEASURES

#### First Aid Procedures:

**Inhalation:** Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a poison center or doctor if you feel unwell.

**Ingestion:** Rinse mouth. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, keep head low so that vomit does not enter lungs. Never give anything by mouth to an unconscious person. Call a physician or poison control center if you feel unwell.

**Skin Contact:** Wash skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if skin irritation occurs.

**Eye Contact:** Check for and remove contact lenses, if present and easy to do. Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention if eye irritation persists.

**General Advice:** Poison information centers in each state can provide additional assistance for scheduled poisons. Ensure that those providing first aid and medical personnel are aware of the material(s) involved and take precautions to protect themselves.

**Symptoms and Effects:** Irritation, nausea, vomiting, coughing, diarrhea. May be harmful if swallowed, inhaled, or exposed to the skin or eyes. Inhalation may cause respiratory irritation. May affect the circulatory system. Prolonged or repeated exposure may cause liver effects.

**Immediate Medical Care/Special Treatment:** Get medical attention if you feel unwell or are concerned. Treat symptomatically.

## 5. FIREFIGHTING MEASURES

**Suitable Extinguishing Media:** Water spray, dry powder, alcohol resistant foam, carbon dioxide.

**Unsuitable Extinguishing Media:** Do not use a solid (straight) water stream, as it may scatter and spread fire.

**Hazardous Combustion Products:** Iron oxides, nitrogen oxides, sulfur oxides.

**Specific Hazards:** Excessive thermal conditions may cause decomposition and yield hazardous combustion products listed above.

**Special Protective Equipment/Precautions for Firefighters:** As in any fire, wear a MSHA/NIOSH-approved (or equivalent), self-contained, positive-pressure or pressure-demand breathing apparatus and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions and Protective Equipment:** Isolate hazard area and keep unnecessary and unprotected personnel away from the area of the leak or spill. Wear appropriate personal protective equipment (see Section 8). Avoid contact with eyes, skin, and clothing.

**Emergency Procedures:** In case of chemical emergency, or if unsure how to address an accidental release, consult a professional (see Section 1).

**Methods for Containment:** Prevent entry into waterways, sewer, basements, or confined areas. Avoid generation of product dust. Product should not be released to the environment. Contain and recover crystal when possible.

**Methods for Cleanup:** Sweep up and collect spill and place in a non-combustible container for reclamation or disposal. Do not flush to sewer. Clean contaminated surface thoroughly. Never return spills in original containers for reuse. Clean up in accordance with all applicable regulations.

## 7. HANDLING AND STORAGE

**Handling:** Wear personal protective equipment (see Section 8). Provide sufficient air exchange and/or exhaust in work rooms. Avoid contact with skin, eyes, and clothing. Avoid generation of dust. Do not breathe product dust. Limit exposure to light and air. Do not ingest. When using, do not eat, drink, or smoke. Keep away from incompatible materials (see Section 10). Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling. Containers of this material may be hazardous when empty, as they retain product residues. Observe all warnings and precautions listed for this product.

**Storage:** Store in a cool, dry, ventilated area. Store away from heat and incompatible materials (see Section 10). Store in original container. Keep containers tightly closed and upright. Keep out of light. Keep away from food, drink, and animal foodstuffs. Keep out of the reach of children. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of this product.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

**Exposure Limits:** ACGIH (TLV): 1 mg/m<sup>3</sup>  
NIOSH (TWA): 1 mg/m<sup>3</sup>

**Engineering Controls:** Ensure adequate ventilation. 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.

**Personal Protective Measures:**

**Eye/Face Protection:** Wear safety glasses with side shields or goggles and a face shield. Maintain approved eye wash station and accessible rinse facilities in work area.

**Skin Protection:** Wear appropriate chemical resistant clothing (with long sleeves) and appropriate chemical resistant gloves.

**Respiratory Protection:** An air-purifying, NIOSH-approved respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Use a positive-pressure, air-supplied respirator if there is any potential for an uncontrolled release, if exposure levels are unknown, or if any other circumstances exist where air-purifying respirators may not provide adequate protection.

**Specific Requirements for Personal Protective Equipment:** Ensure that glove material is compatible with this product. This information is available from glove manufacturers.

<b>9. PHYSICAL AND CHEMICAL PROPERTIES</b>
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*Unless otherwise indicated, all properties are given at 25 °C and standard pressure.*

<b>Appearance:</b>	Colorless to blue-green, translucent, crystalline solid.
<b>Odor:</b>	Odorless.
<b>Odor Threshold:</b>	No information found.
<b>Formula Weight:</b>	392.13
<b>pH:</b>	3 – 5 (5% w/v aqueous)
<b>Melting/Freezing Point:</b>	100 °C
<b>Boiling Point/Range:</b>	No information found.
<b>Decomposition Temperature:</b>	No information found.
<b>Flash Point:</b>	Not applicable.
<b>Auto-ignition Temperature:</b>	Not applicable.
<b>Flammability:</b>	Not flammable.
<b>Flammability/Explosive Limits:</b>	Not applicable.
<b>Solubility:</b>	269 g/L aqueous.
<b>Vapor Pressure:</b>	No information found.
<b>Vapor Density:</b>	No information found.
<b>Specific Gravity:</b>	1.865 (Water = 1)
<b>Evaporation Rate:</b>	No information found.
<b>Viscosity:</b>	No information found.
<b>Partition Coefficient (n-octanol/water):</b>	No information found.

## 10. STABILITY AND REACTIVITY

<b>Reactivity Data:</b>	No information found.
<b>Chemical Stability:</b>	Stable under normal conditions. Sensitive to light. Sensitive to air.
<b>Conditions to Avoid:</b>	Excessive heat, exposure to light, exposure to air, incompatible materials.
<b>Incompatible Materials:</b>	Strong oxidizers, strong bases.
<b>Hazardous Decomposition Products:</b>	Iron oxides, nitrogen oxides, ammonia, sulfur oxides.
<b>Possibility of Hazardous Reactions:</b>	May react vigorously or violently with the incompatible materials listed above. Excessive thermal conditions may yield hazardous decomposition products.
<b>Hazardous Polymerization:</b>	Will not occur.

## 11. TOXICOLOGICAL INFORMATION

<b>Routes of Exposure:</b>	Inhalation, ingestion, skin contact, eye contact.
<b>Acute Effects:</b>	May be harmful if swallowed, inhaled, or exposed to the skin or eyes. Inhalation may cause respiratory irritation. May affect the circulatory system.
<b>Chronic Effects:</b>	Prolonged or repeated exposure may cause liver effects.
<b>Toxicological Data:</b>	LD <sub>50</sub> Oral, Rat: 3250 mg/kg
<b>Symptoms of Exposure:</b>	Irritation, nausea, vomiting, coughing, diarrhea.
<b>Carcinogenic Effects:</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicological Data:</b>	No information found.
<b>Persistence and Degradability:</b>	No information found.
<b>Environmental Effects:</b>	Not expected to be hazardous to the environment. However, the possibility of an environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

## 13. DISPOSAL INFORMATION

<b>Disposal Instructions:</b>	Dispose of this material and its container to an approved waste collection point. Minimize exposure to product waste (see Section 8). Do not dispose unused waste down drains or into sewers. All wastes must be handled in accordance with local, state, and federal regulations.
<b>Contaminated Packaging:</b>	Because emptied containers may retain product residue, follow label warnings even after container is emptied. Offer rinsed packaging material to local recycling facilities.
<b>Waste Codes:</b>	No information found.

## 14. TRANSPORT INFORMATION

**DOT:** Not regulated.

**Environmental Hazard Regulations:** Not a marine pollutant.

**Other Transport Precautions:** EPA Reportable Quantity: 1000 lb

## 15. REGULATORY INFORMATION

### U.S. Federal Regulations:

**OSHA:** This product is considered a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Inventory:** All components of this product are on the U.S. TSCA Inventory.

### U.S. EPCRA (SARA Title III):

**Section 302:** No information found.

**Sections 311/312:**

Hazard Category	List (Yes/No)
Section 311 – Hazardous Chemical	Yes
Immediate Hazard	Yes
Delayed Hazard	Yes
Fire Hazard	No
Pressure Hazard	No
Reactivity Hazard	No

**Section 313:** No information found.

**CERCLA Reportable Quantities:** No information found.

### International Inventories:

Country or Region	Inventory Name	On Inventory (Yes/No)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

\*A "Yes" indicates that the listed component(s) of this product comply with the inventory requirements administered by the governing country(s).

## 16. OTHER INFORMATION

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