

MSDS# 09715

Section 1 - Chemical Product and Company Identification

MSDS Name: Iron(II) ammonium sulfate hexahydrate

Catalog Numbers: AC201370000, AC201370010, AC201370050, AC201370250, AC201370251, AC201375000
AC201375000, AC318300000, AC423720000, AC423720030, AC423721000, AC423725000
AC423725000, I77-212, I77-500

Synonyms: Ferrous ammonium sulfate hexahydrate; Ammonium iron(2+) sulfate hexahydrate; Mohr's salt.

Company Identification: Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call: 201-796-7100

Emergency Number US: 201-796-7100

CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

Risk Phrases:

CAS#: 7783-85-9

Chemical Name: Iron(II) ammonium sulfate hexahydrate

%: >98.5

EINECS#: unlisted

Hazard Symbols:

Text for R-phrases: see Section 16

Hazard Symbols: XI



Risk Phrases: 36/37/38

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Warning! Light sensitive. Air sensitive. Causes eye, skin, and respiratory tract irritation. Target Organs: Liver, cardiovascular system.

Potential Health Effects

Eye: Causes eye irritation.

Skin: Causes skin irritation.

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

Inhalation: Causes respiratory tract irritation.

Chronic: Chronic exposure may cause liver damage.

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: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

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

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.

Extinguishing Media: Use extinguishing media most appropriate for the surrounding fire.

Autoignition Temperature: Not applicable.

Flash Point: Not applicable.

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

NFPA Rating: health: 2; 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 generating dusty conditions.

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 ingestion and inhalation.

Storage: Keep container closed when not in use. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from light.

Section 8 - Exposure Controls, Personal Protection

| Chemical Name | ACGIH | NIOSH | OSHA - Final PELs |
|---------------------------------------|--|--|-------------------|
| Iron(II) ammonium sulfate hexahydrate | 1 mg/m ³ TWA (as Fe) (listed under Iron salts (soluble)). | 1 mg/m ³ TWA (as Fe) (listed under Iron salts (soluble)). | none listed |
| Ferrous ammonium sulfate anhydrous | 1 mg/m ³ TWA (as Fe) (listed under Iron salts (soluble)). | 1 mg/m ³ TWA (as Fe) (listed under Iron salts (soluble)). | none listed |

OSHA Vacated PELs: Iron(II) ammonium sulfate hexahydrate: 1 mg/m³ TWA (as Fe) (listed under Iron salts (soluble))
 Ferrous ammonium sulfate anhydrous: 1 mg/m³ TWA (as Fe) (listed under Iron salts (soluble))

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Personal Protective Equipment

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face

- Eyes: 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 respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Crystals

Color: light green

Odor: odorless

pH: 3-5 (5% aq soln)

Vapor Pressure: Not available

Vapor Density: Not available

Evaporation Rate: Not available

Viscosity: Not available

Boiling Point: Not available

Freezing/Melting Point: 100 deg C (dec)

Decomposition Temperature:

Solubility in water: 269 g/l @ 20°C

Specific Gravity/Density: 1.865

Molecular Formula: FeH8N2O8S2 x 6H2O

Molecular Weight: 392.13

Section 10 - Stability and Reactivity

- Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions. Slowly oxidized by atmospheric oxygen. Deliquescent (tending to absorb atmospheric water vapor and become liquid). Slowly effloresces (loses water molecules of hydration) on exposure to air.
- Conditions to Avoid: Light, dust generation, excess heat, prolonged exposure to air.
- Incompatibilities with Other Materials: Strong oxidizing agents, strong acids.
- Hazardous Decomposition Products: Oxides of sulfur, nitrogen oxides (NOx) and ammonia (NH3), oxides of iron.
- Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

- RTECS#: CAS# 7783-85-9: BR6500000
CAS# 10045-89-3: WS5890000
- RTECS:
CAS# 7783-85-9: Oral, rat: LD50 = 3250 mg/kg;
- LD50/LC50: .
- RTECS:
CAS# 10045-89-3:
- Carcinogenicity: Iron(II) ammonium sulfate hexahydrate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Ferrous ammonium sulfate anhydrous - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
- Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Not available

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: Not Regulated

Hazard Class:

UN Number:

Packing Group:

Canada TDG

Shipping Name: Not regulated as a hazardous material

Hazard Class:

UN Number:

Packing Group:

USA RQ: CAS# 10045-89-3: 1000 lb final RQ; 454 kg final RQ

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XI

Risk Phrases:

R 36/37/38 Irritating to eyes, respiratory system and skin.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

WGK (Water Danger/Protection)

CAS# 7783-85-9: Not available

CAS# 10045-89-3: 1

Canada

CAS# 10045-89-3 is listed on Canada's DSL List

Canadian WHMIS Classifications: D2B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 7783-85-9 is not listed on Canada's Ingredient Disclosure List.

CAS# 10045-89-3 is not listed on Canada's Ingredient Disclosure List.

US Federal

TSCA

CAS# 7783-85-9 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS number for the anhydrous form is on the Inventory (40CFR720.3(u)(2)).

CAS# 10045-89-3 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 9/02/1997

Revision #9 Date 7/20/2009

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 the company 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 the company has been advised of the possibility of such damages.
