



Reactivity Rating        0

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### Section 3 - Composition, Information on Ingredients

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COMPONENT : Ammonium Iron(II) Sulfate Hexahydrate

CAS No. : 7783-85-9

PERCENTAGE : 100%

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### Section 4 - First Aid Measures

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**General information:** Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

**Ingestion:** Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.

**Inhalation:** Move to fresh air. Get medical attention if symptoms persist.

**Skin contact:** Wash skin thoroughly with soap and water. Get medical attention if symptoms occur.

**Eye contact:** Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if symptoms occur.

**Most important symptoms/effects, acute and delayed Symptoms:** Irritating to eyes, respiratory system and skin.

**Indication of immediate medical attention and special treatment needed Treatment:** Treat symptomatically.

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### Section 5 - Fire Fighting Measures

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**General fire hazards:** In case of fire and/or explosion do not breathe fumes.

**Suitable (and unsuitable) extinguishing media**

**Suitable extinguishing media:** Use fire-extinguishing media appropriate for surrounding materials.

**Unsuitable extinguishing media:** None known.

**Specific hazards arising from the chemical:** During fire, gases hazardous to health may be formed.

**Special protective equipment and precautions for firefighters**

**Special fire fighting procedures:** Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out.

**Special protective equipment for fire-fighters:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

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### Section 6 - Accidental Release Measures

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**Personal precautions, protective equipment and emergency procedures:** Keep unauthorized personnel away. Ventilate closed spaces before entering them. Use personal protective equipment. See Section 8 of the MSDS for Personal Protective Equipment.

**Methods and material for containment and cleaning up:** Sweep up and place in a clearly labeled container for chemical waste. Clean surface thoroughly to remove residual contamination.

**Notification Procedures:** Inform authorities if large amounts are involved.

**Environmental precautions:** Do not contaminate water sources or sewer. Avoid discharge into drains, water courses or onto the ground.

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## Section 7 - Handling and Storage

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**Precautions for safe handling:** Use personal protective equipment as required. Avoid contact with eyes, skin, and clothing. Avoid inhalation of dust. Do not eat, drink or smoke when using the product. Wash hands thoroughly after handling.

**Conditions for safe storage, including any incompatibilities:** Keep container tightly closed. Store in a well-ventilated place. Store in a dry place.

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## Section 8 - Exposure Controls, Personal Protection

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### Control parameters

#### Occupational exposure limits

FERROUS AMMONIUM SULFATE (HYDRATED FORM) - as Fe

Type	Exposure Limit values	Source
TWA	1 mg/m <sup>3</sup>	US. ACGIH Threshold Limit Values (2011)
REL	1 mg/m <sup>3</sup>	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
TWA	1 mg/m <sup>3</sup>	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)

**Appropriate engineering controls** No data available.

#### Individual protection measures, such as personal protective equipment

**General information:** Good general ventilation (typically 10 air changes per hour) should be used. 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. An eye wash and safety shower must be available in the immediate work area.

**Eye/face protection:** Wear safety glasses with side shields (or goggles).

#### Skin protection

**Hand protection:** Chemical resistant gloves

**Other:** Wear suitable protective clothing.

**Respiratory protection:** In case of inadequate ventilation use suitable respirator. Air-purifying respirator with a high efficiency particulate filter.

**Hygiene measures:** Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

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## Section 9 - Physical and Chemical Properties

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### Appearance

**Physical state:** Deliquescent solid

**Color:** Green ~ blue

**Odor:** Odorless

**Odor threshold:** No data available.

**pH:** 3.0 ~ 5.0 (5% solution)

**Melting point/freezing point:** No data available.

**Initial boiling point and boiling range:** Not applicable

**Flash Point:** : No data available.

**Evaporation rate:** Not applicable

**Flammability (solid, gas):** No data available.

**Upper/lower limit on flammability or explosive limits:** No data available.

**Vapor pressure:** Not applicable

**Vapor density:** >1.0

**Relative density:** 1.86~1.864g/cm<sup>3</sup>

**Solubility(ies)**

**Solubility in water:** Soluble

**Solubility (other):** No data available.

**Partition coefficient (n-octanol/water):** No data available.

**Auto-ignition temperature:** No data available.

**Decomposition temperature:** 392.14°C

**Viscosity:** No data available.

**Molecular weight:** No data available.

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## Section 10 - Stability and Reactivity

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**Reactivity:** No dangerous reaction known under conditions of normal use.

**Chemical stability:** Material is stable under normal conditions.

**Possibility of hazardous reactions:** Hazardous polymerization does not occur.

**Conditions to avoid:** Heat, sparks, flames. Moisture.

**Incompatible materials:** Sulfuric acid. Strong oxidizing agents. Strong acids.

**Hazardous decomposition products:** Thermal decomposition may produce oxides of carbon and nitrogen.  
Oxides of sulfur. ammonia

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## Section 11 - Toxicological Information

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**Information on likely routes of exposure**

**Ingestion:** May be harmful if swallowed.

**Inhalation:** Dust may irritate respiratory system.

**Skin contact:** Causes skin irritation.

**Eye contact:** Causes serious eye irritation.

**Information on toxicological effects**

**Acute toxicity (list all possible routes of exposure)**

**Oral Product:** LD 50 (Rat): 3,250 mg/kg

**Dermal Product:** No data available.

**Inhalation Product:** No data available.

**Repeated dose toxicity Product:** No data available.

**Skin corrosion/irritation Product:** Causes skin irritation.

**Serious eye damage/eye irritation Product:** Causes serious eye irritation.

**Respiratory or skin sensitization Product:** Not a skin sensitizer.

**Carcinogenicity Product:** This substance has no evidence of carcinogenic properties.

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

No carcinogenic components identified

**US. National Toxicology Program (NTP) Report on Carcinogens:**

No carcinogenic components identified

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):**

No carcinogenic components identified

**Germ cell mutagenicity**

**In vitro Product:** No mutagenic components identified

**In vivo Product:** No mutagenic components identified

**Reproductive toxicity Product:** No components toxic to reproduction

**Specific target organ toxicity - single exposure Product:** Respiratory tract irritation.

**Specific target organ toxicity - repeated exposure Product:** None known.

**Aspiration hazard Product:** Not classified

**Other effects:** None known.

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**Section 12 - Ecological Information**

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**Ecotoxicity:**

**Acute hazards to the aquatic environment:**

**Fish Product:** No data available.

**Aquatic invertebrates Product:** No data available.

**Chronic hazards to the aquatic environment:**

**Fish Product:** No data available.

**Aquatic invertebrates Product:** No data available.

**Toxicity to Aquatic Plants Product:** No data available.

**Persistence and degradability**

**Biodegradation Product:** There are no data on the degradability of this product.

**BOD/COD ratio Product:** No data available.

**Bioaccumulative potential**

**Bioconcentration factor (BCF) Product:** No data available on bioaccumulation.

**Partition coefficient n-octanol / water (log Kow) Product:** No data available.

**Mobility in soil:** No data available.

**Other adverse effects:** The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

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**Section 13 - Disposal Considerations**

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**Disposal instructions:** Discharge, treatment, or disposal may be subject to national, state, or local laws.

**Contaminated packaging:** Since emptied containers retain product residue, follow label warnings even after container is emptied.

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**Section 14 - Transport Information**

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UN Number: Not regulated

Shipping Name: Not applicable

Hazard Class: Not applicable

Packing Group: Not applicable

Marine Pollutant: : No data available

Safety measures : Not applicable

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**Section 15 - Regulatory Information**

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**US federal regulations****TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)****US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

None present or none present in regulated quantities.

**CERCLA Hazardous Substance List (40 CFR 302.4):**

FERROUS AMMONIUM SULFATE (HYDRATED FORM) Reportable quantity: 1000 lbs.

**Superfund amendments and reauthorization act of 1986 (SARA)****Hazard categories**

X Acute (Immediate) Chronic (Delayed) Fire Reactive Pressure Generating

**SARA 302 Extremely hazardous substance**

None present or none present in regulated quantities.

**SARA 304 Emergency release notification****Chemical identity****RQ**

FERROUS AMMONIUM SULFATE (HYDRATED FORM) 1000 lbs.

**SARA 311/312 Hazardous chemical****Chemical identity****Threshold Planning Quantity**

FERROUS AMMONIUM SULFATE (HYDRATED FORM) 500 lbs

**SARA 313 (TRI reporting)**

<b>Chemical identity</b>	<b>Reporting threshold for other users</b>	<b>Reporting threshold for manufacturing and processing</b>
FERROUS AMMONIUM SULFATE (HYDRATED FORM)	10000 lbs	25000 lbs.

**Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)**

FERROUS AMMONIUM SULFATE (HYDRATED FORM) Reportable quantity: 1000 lbs.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):**

None present or none present in regulated quantities.

**US state regulations****US. California Proposition 65**

No ingredient regulated by CA Prop 65 present.

**US. New Jersey Worker and Community Right-to-Know Act**

FERROUS AMMONIUM SULFATE (HYDRATED FORM) Listed

**US. Massachusetts RTK - Substance List**

FERROUS AMMONIUM SULFATE (HYDRATED FORM) Listed

**US. Pennsylvania RTK - Hazardous Substances**

FERROUS AMMONIUM SULFATE (HYDRATED FORM) Listed

**US. Rhode Island RTK**

FERROUS AMMONIUM SULFATE (HYDRATED FORM) Listed

**Inventory Status:**

Canada DSL Inventory List:	On or in compliance with the inventory
EU EINECS List:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
Australia AICS:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory

Japan (ENCS) List:	Not in compliance with the inventory.
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Japan ISHL Listing:	Not in compliance with the inventory.
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.

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**Section 16 - Other Information**

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Sources : KOSHA, National Emergency Management Agency

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