

Safety Data Sheet

Section 1: Identification

Product Name: Ferrous Sulfate Monohydrate

Product Type: Solid

Recommended Uses: For further manufacturing of feed. For Fertilizer.

Synonyms: Copperas, Iron (II) Sulfate

Company Identification:

Origination, LLC

1802 Wooddale Drive, Suite 200

Woodbury, MN 55125

For information, call: 1-800-625-6079

Emergency Number: 1-800-625-6079

For CHEMTREC assistance, call: 1-800-424-9300

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

Section 2: Hazard(s) Identification

Classification

Acute Toxicity, Oral	Category 4
Skin irritation	Category 2
Eye Irritation	Category 2A

GHS Label elements, including precautionary statements

Pictogram:



Signal word: Warning

Hazard statement(s): Harmful if swallowed.

Causes skin irritation.

Causes serious eye irritation.

Precautionary statement(s): Wash skin thoroughly after handling. Do not eat, drink, or smoke when using this product. Wear protective gloves/eye protection/face protection.

IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.

IF ON SKIN: Wash with plenty of soap and water.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Specific treatment (see supplemental first aid instructions on this label). Rinse mouth.

If skin irritation occurs: Get medical advice/ attention.

Ferrous Sulfate Monohydrate



If eye irritation persists: Get medical advice/ attention. Remove contaminated clothing and wash before reuse. Dispose of contents/container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC): None

Section 3: Composition / Information on Ingredients

Substances

Synonyms:	Ferrous Sulfate Monohydrate
Formula:	FeSO ₄ · 1H ₂ O
Molecular Weight:	169.92 g/mol
CAS-No.:	17375-41-6
Weight %:	>99%

Hazardous components

Component:	Classification:
Ferrous Sulfate Monohydrate	Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2A; H302, H315, H319

Section 4: First Aid Measures

Description of first aid measures

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact: Wash off with soap and plenty of water. Consult a physician.

In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed: The most important known symptoms and effects are described in the labelling (see Section 2.2) and/or in Section 11.

Indication of any immediate medical attention and special treatment needed: No data available.

Section 5: Fire Fighting Measures

Extinguishing media

Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Special hazards arising from the substance or mixture: Sulphur oxides, Iron oxides.

Advice for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

Further information: The product itself does not burn.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Avoid breathing dust. For personal protection see Section 8.

Environmental precautions: Do not let product enter drains.

Methods and materials for containment and cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Reference to other sections: For disposal see Section 13.

Section 7: Handling and Storage

Precautions for safe handling: Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see Section 2.

Conditions for safe storage, including any incompatibilities: Keep container tightly closed in a dry and well-ventilated place. Air sensitive. Store under inert gas. Hygroscopic.

Specific end use(s): Apart from the uses mentioned in Section 1 no other specific uses are stipulated.

Section 8: Exposure Controls, Personal Protection

Control Parameters

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Ferrous sulfate Monohydrate	17375-41-6	TWA	1 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Upper Respiratory Tract & skin irritation varies		
		TWA	1 mg/m ³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	1 mg/m ³	USA. NIOSH Recommended Exposure Limits

Exposure Controls

Appropriate engineering controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal Protective Equipment

Eye/face protection: Safety glasses with side-shields.

Ferrous Sulfate Monohydrate



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Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body protection: Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: For nuisance exposures use a particle respirator. For higher level protection use type, wear NIOSH approved air-purifying respirator with cartridges/canisters.

Control of environmental exposure: Do not let product enter drains.

Section 9: Physical and Chemical Properties

Physical and Chemical Properties

Physical State: Solid

Appearance: Grey, acidic/sour **Odor:** No data available

Color: Grey **Odor Threshold:** No data available

pH: 3.0 – 4.0 @ 50 g/l @ 25° C (77° F)

Melting/freezing point Melting point/range: 64° C (147° F) Loses water

Flash Point: No data available

Evaporation Rate: No data available

Flammability (solid, gas): No data available

Upper flammability limit: No data available

Lower flammability limit: N/A

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Water solubility: No data available

Solubility in other solvents: No data available

Partition coefficient: n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

Explosive properties: No data available

Oxidizing properties: No data available

Bulk density: 1,100 kg/m³

Section 10: Stability and Reactivity

Reactivity: No data available.

Chemical Stability: Stable under recommended storage conditions.

Ferrous Sulfate Monohydrate



Possibility of Hazardous Reactions: No data available.

Hazardous: Polymerization: No data available.

Conditions to Avoid: No data available.

Incompatible Materials: Strong oxidizing agents.

Hazardous Decomposition Products: Other decomposition products – no data available. In the event of a fire see Section 5.

Section 11: Toxicological Information

Information on likely routes of exposure

Product information

Inhalation: No data available

Eye contact No data available

Skin contact: No data available

Ingestion: Harmful if swallowed

Component Information

Information on toxicological effects

Symptoms No data available

Delayed and immediate effects as well as chronic effects from short & long-term exposure

Sensitization: No data available.

Mutagenic effects: No data available.

Carcinogenicity: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

STOT-single exposure: No data available.

STOT-repeated exposure: No data available.

Chronic toxicity: No data available.

Target organ exposure: No data available.

Aspiration hazard: No data available.

Numerical measure of toxicity product information

The following values are calculated based on Section 3 of the GHS document: No data available.

Section 12: Ecological Information

Ecotoxicity: No data available.

Persistence and Degradability: No data available.

Bioaccumulation: No data available.

Other adverse effects: No data available.

Section 13: Disposal Considerations (non-mandatory)

Waste treatment methods

Disposal methods: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging: Dispose of as unused product.

Section 14: Transport Information

DOT (US) UN Number: 3077 Class: 9 Packing group: III
Proper shipping name Environmentally hazardous substance, solid, n.o.s.
(Ferrous Sulfate Monohydrate)
Reportable Quantity (RQ): 1,000 lbs
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG: Not dangerous goods.

IATA: Not dangerous goods.

Section 15: Regulatory Information

INTERNATIONAL INVENTORIES

TSCA: CAS# 17375-41-6 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS# for the anhydrous form is on the inventory (40CFR720.3(u)(2)).
CAS# 17375-41-6 is listed on the TSCA Inventory.

DSL: CAS# 17375-41-6 is listed on Canada's DSL List.

US Federal Regulations

SARA 313: SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA + Title III, Section 313.

SARA 311/312 Hazard Categories: Acute health hazard
Chronic health hazard

CWA (Clean Water Act) Section 311 Hazardous Substances (40 CFR 117.3)
Sulfuric acid, Iron (2) salt (1:1), Monohydrate
Reportable quantity: 1000 lbs.

CERCLA (40 CFR 302.4)
Sulfuric acid, Iron (2) salt (1:1), Monohydrate
Reportable quantity: 1000 lbs.

Ferrous Sulfate Monohydrate



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US State Regulations

California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

US State Right-to-Know Regulations

Massachusetts Right-to-Know Components:

Ferrous Sulfate Monohydrate CAS-No. 17375-41-6 Revision Date: 1993-04-24

Pennsylvania Right-to-Know Components:

Ferrous Sulfate Monohydrate CAS-No. 17375-41-6 Revision Date: 1993-04-24

New Jersey Right-to-Know Components:

Ferrous Sulfate Monohydrate CAS-No. 17375-41-6 Revision Date: 1993-04-24

International Regulations

Canada WHMIS Hazard Class: Uncontrolled product; Disclosure at 1%.

Section 16: Additional Information

NFPA Rating Health hazard: 2

Fire Hazard: 0

Reactivity Hazard: 0

HMIS Rating Health hazard: 2

Chronic Health Hazard:

Flammability: 0

Physical Hazard 0

Prepared by: Origination, LLC

Prepared: November 12, 2020

Disclaimer:

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