



5/11/2015

284219

Larned Waste Water Treatment P
320 South Rose Avenue
Larned, KS 67550

Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910
Fax: (612) 331-5304

MSDS Enclosed For

Product Id	Product Name:	Revision Date:	Order No
40487	Ferric Sulfate 10% Iron	September 17, 2013	1933956 40487

Dear Customer:

Enclosed please find a Safety Data Sheet for the product(s) that you have requested or purchased from Hawkins, Inc.

The legislature of the State of Minnesota has enacted the "Employee Right to Know Act of 1983." This Act requires employers using hazardous substances to provide employees with certain training and information about the hazardous substance and its proper use in the workplace. An employer is mandated by this Act to inform all employees so they are fully aware of any hazards that may be involved.

We at Hawkins, Inc. are constantly striving to achieve a high level of safety in the industry and our objective in sending you this information is to help you protect the health and safety of your personnel. If you have any questions, or need further information regarding the Safety Data Sheets you have received feel free to call or write.

HSE Manager
EMail: HSE@HawkinsInc.com







SAFETY DATA SHEET

Version 1

1. Identification of the Substance / Preparation and of the Company / Undertaking

Product Name: Ferric Sulfate 10% Iron
UN/ID No UN3264
Synonyms: Iron (III) Sulfate
Formula: Fe₂(SO₄)₃
Company Name: Hawkins, Inc. 3100 E. Hennepin Avenue Minneapolis, MN 55413 (612-331-6910)

Emergency Telephone:
CHEMTREC (US): 1-800-424-9300

2. Hazards Identification

GHS - Classification

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 2
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Carcinogenicity:	Category 1B
Chronic aquatic toxicity	Category 3



Signal Word: Danger

Hazard Statements:

- Harmful if swallowed
- Fatal if inhaled
- Causes severe skin burns and eye damage
- May cause cancer
- Harmful to aquatic life with long lasting effects

Physical Hazards

- None

Precautionary Statements:

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- P270 - Do not eat, drink or smoke when using this product
- P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
- P330 - Rinse mouth
- P271 - Use only outdoors or in a well-ventilated area
- P284 - Wear respiratory protection
- P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
- P260 - Do not breathe dust/fume/gas/mist/vapors/spray
- P264 - Wash face, hands and any exposed skin thoroughly after handling
- P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
- P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- P363 - Wash contaminated clothing before reuse
- P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- P280 - Wear protective gloves/protective clothing/eye protection/face protection
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P310 - Immediately call a POISON CENTER or doctor/physician
- P201 - Obtain special instructions before use
- P202 - Do not handle until all safety precautions have been read and understood
- P281 - Use personal protective equipment as required
- P308 + P313 - IF exposed or concerned: Get medical advice/attention
- P405 - Store locked up
- P273 - Avoid release to the environment
- P501 - Dispose of contents/ container to an approved waste disposal plant

3. Composition / Information on Ingredients

Hazardous

Chemical Name	CAS No	Weight-%	EC No
Ferric sulfate	10028-22-5	50-66	233-072-9
Sulfuric acid	7664-93-9	<0.1	231-639-5

4. First Aid Measures

- General Advice:** Immediate medical attention is required.
- Eye Contact:** Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area.
- Skin Contact:** Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
- Inhalation:** Move to fresh air. Call a physician or poison control center immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
- Ingestion:** Immediate medical attention is required. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Remove from exposure, lie down. Clean mouth with water and drink afterwards plenty of water. Call a physician or poison control center immediately.
- Note to Physicians:** Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Treat symptomatically.
- Self-protection of the First Aider:** Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

5. Fire-fighting Measures

40487 Ferric Sulfate 10% Iron

Flammable Properties:

Oxides of sulfur; when it decomposes

Explosive Properties:

Not considered to be an explosion hazard

Suitable Extinguishing Media:

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

Unsuitable Extinguishing Media:

No information available

Specific Hazards Arising from the Chemical:

The product causes burns of eyes, skin and mucous membranes; Thermal decomposition can lead to release of irritating and toxic gases and vapors; In the event of fire and/or explosion do not breathe fumes

Protective Equipment and Precautions for Firefighters:

In the event of a fire, wear full protective clothing and MSHA/NIOSH (approved or equivalent) self-contained breathing apparatus with full facepiece operated in the pressure-demand or other positive pressure mode

6. Accidental Release Measures

Personal Precautions: Evacuate personnel to safe areas. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak.

Environmental Precautions: Do not allow into any sewer, on the ground or into any body of water. Should not be released into the environment. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods for Cleaning Up: Dike far ahead of liquid spill for later disposal. Soak up with inert absorbent material. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Prevent product from entering drains. Dam up. After cleaning, flush away traces with water.

Other Information: Not applicable.

7. Handling and Storage

Advice on Safe Handling: Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Use only with adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Use only with adequate ventilation and in closed systems.

Storage Conditions: Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

Incompatible Materials: Strong acids and bases; Oxidizing agents

8. Exposure Controls / Personal Protection

Chemical Name	ACGIH TLV		OSHA PEL		Ontario TWA	
Ferric sulfate	TWA: 1 mg/m ³ Fe TWA: 0.1 mg/m ³ Persulfate		(vacated) TWA: 1 mg/m ³ Fe		TWA: 0.1 mg/m ³	
Sulfuric acid	TWA: 0.2 mg/m ³ thoracic fraction		1 mg/m ³ TWA		TWA: 0.2 mg/m ³	
Chemical Name	European Union	China	Japan	Korea	Australia	Taiwan
Ferric sulfate				TWA: 1 mg/m ³	1 mg/m ³	
Sulfuric acid		TWA: 1 mg/m ³ STEL: 2 mg/m ³	Ceiling: 1 mg/m ³	STEL: 0.6 mg/m ³ TWA: 0.2 mg/m ³	1 mg/m ³ 3 mg/m ³ STEL	TWA: 1 mg/m ³

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Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992)

Engineering Controls: Ensure adequate ventilation, especially in confined areas

Personal protective equipment (PPE)

Eye/Face Protection: Tight sealing safety goggles. Face protection shield.

Body Protection: Gloves made of plastic or rubber. Rubber boots. Suitable protective clothing. Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Wear chemical resistant clothing such as gloves, apron, boots or whole bodysuits made from neoprene, as appropriate.

General Hygiene Considerations:

Wash contaminated clothing before reuse. When using do not eat, drink or smoke. Keep away from food, drink and animal feeding stuffs. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Take off all contaminated clothing and wash it before reuse. Wear suitable gloves and eye/face protection.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State:	Liquid	Odor:	Acidic odor
Appearance:	Aqueous solution	Odor Threshold:	No information available
Color:	Red brown		
Property	Values	Remarks • Method	
pH:	1	<2	No information available
"Salt Out" Point (°F):			
Melting Point/Freezing Point:			
Boiling Point/Boiling Range:	107 °C / 225 °F		
Flash Point:			No information available
Evaporation Rate (BuAc=1):			No information available
Flammability (solid, gas):			No information available
Flammability Limits in Air:			No information available
Upper Flammability Limit:			
Lower Flammability Limit:			
Vapor Pressure (mm Hg) :			No information available
Vapor density (Air =1)			No information available
Specific Gravity (H ₂ O=1):	1.43		
Specific Gravity (2nd value):			
Water Solubility:	Soluble in water		
Solubility(ies):			No information available
Partition Coefficient (n-octanol/water)			No information available
Autoignition Temperature:			
Decomposition Temperature:			No information available
Kinematic Viscosity:			No information available
Dynamic Viscosity:			No information available
Oxidizing Properties:	No information available		
Explosive Properties:	Not considered to be an explosion hazard		

9.2. Other information

Softening Point:	No information available
Molecular Weight:	No information available
VOC Content(%):	No information available
Density:	No information available
Bulk Density:	No information available

10. Stability and Reactivity

Stability: Stable under normal conditions of use and storage

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Conditions to Avoid: Exposure to air or moisture over prolonged periods

Incompatible Materials: Strong acids and bases; Oxidizing agents

Hazardous Decomposition Products: Thermal decomposition can lead to release of irritating and toxic gases and vapors

Possibility of Hazardous Reactions: None under normal processing

11. Toxicological Information

Product Information

Acute Toxicity: 58% of the mixture consists of ingredient(s) of unknown toxicity.

The following values are calculated based on chapter 3.1 of the GHS document

Chemical Name	Oral LD ₅₀ :	Dermal LD ₅₀ :	LC ₅₀ (Lethal Concentration):
Ferric sulfate	500 mg/kg (Rat)		
Sulfuric acid	2140 mg/kg (Rat)		347 ppm (Rat) 1 h 510 mg/m ³ (Rat) 2 h

Chronic Toxicity:

Carcinogenicity: This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B)

Chemical Name	IARC
Sulfuric acid	1

IARC (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans

Target Organ Effects: Eyes, Gastrointestinal tract (GI), Liver, Respiratory system, Skin

12. Ecological Information

Ecotoxicity

41.9% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Harmful to aquatic life with long lasting effects

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Ferric sulfate		37.2: 96 h <i>Gambusia affinis</i> mg/L LC50 static	
Sulfuric acid		500: 96 h <i>Brachydanio rerio</i> mg/L LC50 static	29: 24 h <i>Daphnia magna</i> mg/L EC50

Persistence and Degradability: No information available.

Bioaccumulation: No information available.

Mobility: No information available.

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13. Disposal Considerations

Waste from Residues/Unused Products: Disposal should be in accordance with applicable regional, national and local laws and regulations

Contaminated Packaging: Do not reuse container.

14. Transport Information

DOT

Proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (FERRIC SULFATE)
Hazard Class	8
UN/ID No	UN3264
Packing Group	III
Reportable Quantity (RQ)	1,000 lbs.
Description	UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (FERRIC SULFATE), 8, PGIII



15. Regulatory Information

International Inventories

All of the components in the product are on the following Inventory lists: TSCA (United States);, Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Australia (AICS), South Korea (KECL);, China (IECSC), ENCS (Japan);, Philippines (PICCS), This product contains a substance not listed on international inventories - it is for research and development use only.

AICS	Complies
TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies

Chemical Name	AICS	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS
Ferric sulfate	Listed	Listed	Listed	-	Listed	-	(1)-359	Listed	KE-10900	Present
Sulfuric acid	Listed	Listed	Listed	-	Listed	-	(1)-724 (1)-430	Listed	KE-32570	Present

Inventory Legend

AICS - Australian Inventory of Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

RESTRICTIONS - REACH TITLE VII No information available

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US Federal Regulations

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.

Chemical Name	CERCLA Hazardous Substances and the Reportable Quantities	SARA Extremely Hazardous Substances EPCRA RQ	SARA Extremely Hazardous Substances TPQ
Ferric sulfate	1000 lb 454 kg		
Sulfuric acid	1000 lb 454 kg	1000 lb EPCRA RQ	1000 lb TPQ

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

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic health hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive hazard	No

U.S. State Right-to-Know Regulations

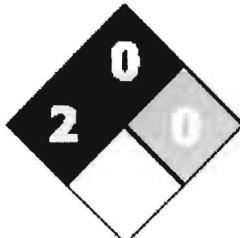
California Proposition 65:

This product contains the following Proposition 65 chemicals

Chemical Name	California Proposition 65:
Sulfuric acid	Carcinogen

16. Other Information

National Fire Protection Association (NFPA) Ratings



Prepared By: HSE Department

Issue Date: 02-May-2012

Revision Date: 17-Sep-2013

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Revision Note: MSDS converted to GHS SDS Format.

Disclaimer:

Please be advised that it is your responsibility to inform your employees of the hazards of this substance, to advise them of what these properties mean and be sure they understand exposure information. 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 presented herein, while not guaranteed, was prepared by competent technical personnel and is true and accurate to the best of our knowledge. No warranty or guaranty, express or implied, is made regarding performance, stability, or otherwise. This information is not intended to be all-inclusive as to the manner and conditions of use, handling, and storage. Other factors may require additional safety or performance considerations. While our technical personnel will be happy to respond to questions regarding safe handling and use procedures, the handling and use remains the responsibility of the consumer. No suggestions are intended as, and should not be construed as, a recommendation to infringe on any existing patents or to violate any Federal, State, or local laws.

End of Safety Data Sheet