



Material Safety Data Sheet

NFPA	HMIS	Personal Protective Equipment						
	<table><tr><td>Health Hazard</td><td>2</td></tr><tr><td>Fire Hazard</td><td>0</td></tr><tr><td>Reactivity</td><td>0</td></tr></table>	Health Hazard	2	Fire Hazard	0	Reactivity	0	 See Section 15.
Health Hazard	2							
Fire Hazard	0							
Reactivity	0							

Section 1. Chemical Product and Company Identification		Page Number: 1
Common Name/ Trade Name	Ferrous sulfate	Catalog Number(s). F1063, F1065
		CAS# 13463-43-9; 7720-78-7 [anhydrous]
Manufacturer	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	RTECS Not available.
		TSCA TSCA 8(b) inventory: Ferrous sulfate (for CAS no. 7720-78-7); CAS no. 13463-43-9 is not listed since it is a hydrate
Commercial Name(s)	Not available.	CI# Not available.
Synonym	Ferrous Sulfate Hydrate; Ferrous Sulfate Dried Powder; Iron (2+) Sulfate hydrate; Iron (2+) Sulfate hydrate (1:1); Sulfuric acid, iron (2+) salt (1:1)	IN CASE OF EMERGENCY CHEMTREC (24hr) 800-424-9300 CALL (310) 516-8000
Chemical Name	Ferrous Sulfate	
Chemical Family	Not available.	
Chemical Formula	FeSO ₄ .xH ₂ O	
Supplier	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	

Section 2. Composition and Information on Ingredients					
		Exposure Limits			
Name	CAS #	TWA (mg/m ³)	STEL (mg/m ³)	CEIL (mg/m ³)	% by Weight
1) Ferrous sulfate	13463-43-9; 7720-78-7 [anhydrous]				100
Toxicological Data on Ingredients					
Ferrous sulfate (CAS no. 7720-78-7): : ORAL (LD50): Acute: 319 mg/kg [Rat]. 680 mg/kg [Mouse].					

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Section 3. Hazards Identification

Potential Acute Health Effects	Hazardous in case of eye contact (irritant), of ingestion, of inhalation (lung irritant). Slightly hazardous in case of skin contact (irritant), .
Potential Chronic Health Effects	CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to blood, liver, gastrointestinal tract, eyes. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.
Skin Contact	In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
Serious Skin Contact	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Serious Inhalation	Not available.
Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.
Serious Ingestion	Not available.

Section 5. Fire and Explosion Data

Flammability of the Product	Non-flammable.
Auto-Ignition Temperature	Not applicable.
Flash Points	Not applicable.
Flammable Limits	Not applicable.
Products of Combustion	Not available.
Fire Hazards in Presence of Various Substances	Not applicable.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.
Fire Fighting Media and Instructions	Not applicable.
Special Remarks on Fire Hazards	Not available.
Special Remarks on Explosion Hazards	Not available.

Section 6. Accidental Release Measures

Small Spill	Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
Large Spill	Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7. Handling and Storage

Precautions	Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area. Hygroscopic Air Sensitive

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
Personal Protection	Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
Exposure Limits	TWA: 1 (mg(Fe)/m ³) from ACGIH (TLV) [United States] Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical state and appearance	Solid.	Odor	Not available.
Molecular Weight	151.9 g/mole + H ₂ O	Taste	Not available.
pH (1% soln/water)	Not available.	Color	Grayish -white to yellowish. (Light.)
Boiling Point	Not available.		
Melting Point	Not available.		
Critical Temperature	Not available.		
Specific Gravity	Not available.		
Vapor Pressure	Not applicable.		
Vapor Density	Not available.		
Volatility	Not available.		
Odor Threshold	Not available.		
Water/Oil Dist. Coeff.	Not available.		
Ionicity (in Water)	Not available.		
Dispersion Properties	See solubility in water.		
Solubility	Soluble in cold water.		

Section 10. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Incompatibles
Incompatibility with various substances	Not available.
Corrosivity	Not available.
Special Remarks on Reactivity	Hygroscopic. Loses water at about 300 C. Air sensitive. No other information found.
Special Remarks on Corrosivity	Not available.
Polymerization	Will not occur.

Section 11. Toxicological Information

Routes of Entry	Inhalation. Ingestion.
Toxicity to Animals	Acute oral toxicity (LD50): 319 mg/kg [Rat] (CAS no. 7720-78-7).
Chronic Effects on Humans	May cause damage to the following organs: blood, liver, gastrointestinal tract, eyes.
Other Toxic Effects on Humans	Hazardous in case of ingestion, of inhalation (lung irritant). Slightly hazardous in case of skin contact (irritant), .
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	May affect genetic material (mutagenic). May cause adverse reproductive effects based on animal test data. May cause cancer based on animal test data.
Special Remarks on other Toxic Effects on Humans	Acute Potential Health Effects: Skin: May cause skin irritation. Eyes: Causes eye irritation. Inhalation: May cause respiratory tract irritation. Ingestion: Harmful if swallowed. May cause gastrointestinal tract disturbances and irritation of the esophagus, ulceration of the stomach, nausea, vomiting (possibly with blood), colic, constipation, diarrhea, black stool. May also affect behavior/Central Nervous System (somnolence -general depressed activity, aggression, lassitude, drowsiness,), cardiovascular system (tachycardia, peripheral vascular collapse), liver (liver damage, jaundice), kidneys (pink urine discoloration, acute renal failure, acute renal tubular necrosis), metabolism (metabolic acidosis, anorexia), respiration (hyperventilation due to metabolic acidosis). Chronic Potential Health Effects: Eyes: Prolonged eye contact may cause a brownish discoloration of the eyes and lead to eye damage. Ingestion: Repeated exposure via ingestion may cause nausea, vomiting, stomach pain, constipation, black bowel movements, increase iron levels in the liver, and spleen, and may produce jaundice. Damage may occur to spleen and liver. Large chronic doses of iron may also interfere with assimilation of phosphorus. Inhalation: Repeated or prolonged inhalation may affect the blood (change in serum composition), brain.

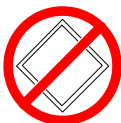
Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	The product itself and its products of degradation are not toxic.
Special Remarks on the Products of Biodegradation	Not available.

Section 13. Disposal Considerations

Waste Disposal	Waste must be disposed of in accordance with federal, state and local environmental control regulations.
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Section 14. Transport Information

DOT Classification	Not a DOT controlled material (United States).
Identification	Not applicable.
Special Provisions for Transport	Not applicable.
DOT (Pictograms)	

Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations	The following information is for CAS no. 7720-78-7: Connecticut hazardous material survey.: Ferrous sulfate Illinois chemical safety act: Ferrous sulfate New York release reporting list: Ferrous sulfate Pennsylvania RTK: Ferrous sulfate Minnesota: Ferrous sulfate (actually listed as Iron salts, soluble Massachusetts RTK: Ferrous sulfate Massachusetts spill list: Ferrous sulfate New Jersey: Ferrous sulfate New Jersey spill list: Ferrous sulfate California Director's List of Hazardous Substances: Ferrous sulfate TSCA 8(b) inventory: Ferrous sulfate; Note that CAS no. 13463-43-9 is not on the TSCA inventory since it is a hydrate. CERCLA: Hazardous substances.: Ferrous sulfate: 1000 lbs. (453.6 kg)	
California Proposition 65 Warnings	California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found. California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.	
Other Regulations	OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). CAS no. 7720-78-7 is listed on the following international lists: Korea Inventory (KECI), Australia (AICS), Japan (ENCS National Inventory), Canadian DSL CAS no. 13463-43-9 is listed on the following international lists: China (National Inventory), Australia (AICS)	
Other Classifications	WHMIS (Canada)	Not controlled under WHMIS (Canada).

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DSCL (EEC)

R22- Harmful if swallowed.
R36/37/38- Irritating to eyes,
respiratory system and skin.

S26- In case of contact with eyes, rinse
immediately with plenty of water and seek
medical advice.
S36- Wear suitable protective clothing.

HMIS (U.S.A.)

Health Hazard	2
Fire Hazard	0
Reactivity	0
Personal Protection	E

**National Fire Protection
Association (U.S.A.)**

Health



Flammability

Reactivity

Specific hazard

**WHMIS (Canada)
(Pictograms)**



**DSCL (Europe)
(Pictograms)**



**TDG (Canada)
(Pictograms)**



**ADR (Europe)
(Pictograms)**



Protective Equipment



Gloves.



Lab coat.



Dust respirator. Be sure to use an
approved/certified respirator or
equivalent.



Splash goggles.

Section 16. Other Information**MSDS Code** F3245**References** Not available.**Other Special Considerations** Not available.

Validated by Sonia Owen on 8/11/2006.

Verified by Sonia Owen.

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CALL (310) 516-8000

Notice to Reader

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.