



GARDENA, CA
NEW BRUNSWICK, NJ

Material Safety Data Sheet

NEPA	HMIS	Personal Protective Equipment						
	<table><tr><td>Health Hazard</td><td>1</td></tr><tr><td>Fire Hazard</td><td>0</td></tr><tr><td>Reactivity</td><td>0</td></tr></table>	Health Hazard	1	Fire Hazard	0	Reactivity	0	 See Section 15.
Health Hazard	1							
Fire Hazard	0							
Reactivity	0							

Section 1. Chemical Product and Company Identification

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Common Name/ Trade Name	Ferric Subsulfate Solution	Catalog Number(s).	FE107, F1305
Manufacturer	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	CAS#	Mixture.
Commercial Name(s)	Monse's Solution	RTECS	Not applicable.
Synonym	Not available.	TSCA	TSCA 8(b) inventory: Ferric subsulfate; Water
Chemical Name	Not applicable.	CI#	Not applicable.
Chemical Family	Salt.	IN CASE OF EMERGENCY CIEMTREC (24hr) 800-424-9300 CALL (310) 516-8000	
Chemical Formula	Not applicable.		
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) Ferric subsulfate	1310-45-8				20-22
2) Water	7732-18-5				78-80

Toxicological Data
on Ingredients

Section 3. Hazards Identification

Potential Acute Health Effects Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, .

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, kidneys, liver, lymphatic system, pancreas.

Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

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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 if irritation occurs.
Skin Contact	Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used.
Serious Skin Contact	Not available.
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	If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
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	Non-explosive in presence of open flames and sparks, of shocks.
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	Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
Large Spill	Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. 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 ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area. Sensitive to light. Store in light-resistant containers. Product may freeze/crystallize at very cool temperatures. Crystals will redissolve upon gentle heating.

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.
Personal Protection	Safety glasses. Lab coat. Gloves (impervious).
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Boots. Gloves. 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	Liquid.	Odor	Slight.
Molecular Weight	Not applicable.	Taste	Astringent. sour (Strong.)
pH (1% soln/water)	pH of actual Ferric Subsulfate solution: Acidic to litmus	Color	Brownish-red.
Boiling Point	The lowest known value is 100°C (212°F) (Water).		
Melting Point	Not available.		
Critical Temperature	Not available.		
Specific Gravity	1.548 @ 25 C (Water = 1)		
Vapor Pressure	The highest known value is 2.3 kPa (@ 20°C) (Water).		
Vapor Density	The highest known value is 0.62 (Air = 1) (Water).		
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	Easily soluble in cold water, hot water.		

Section 10. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Light, incompatible materials
Incompatibility with various substances	Not available.
Corrosivity	Non-corrosive in presence of glass.

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Ferric Subsulfate Solution		Page Number: 4
Special Remarks on Reactivity	Sensitive to light. No other information found at this time	
Special Remarks on Corrosivity	Not available.	
Polymerization	Will not occur.	

Section 11. Toxicological Information	
Routes of Entry	Absorbed through skin. Eye contact.
Toxicity to Animals	LD50: Not available. LC50: Not available.
Chronic Effects on Humans	May cause damage to the following organs: blood, kidneys, liver, lymphatic system, pancreas.
Other Toxic Effects on Humans	Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.
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
Special Remarks on other Toxic Effects on Humans	Acute Potential Health Effects: Skin: May cause skin irritation, but no adverse effects are expected. Eyes: Splashes may cause eye irritation. Inhalation: Vapor may cause respiratory tract irritation. Ingestion: May be harmful if swallowed. There is a low toxicity in small quantities, but larger doses may lead to iron poisoning and cause gastrointestinal tract irritation (gastroenteritis) with nausea, retching & vomiting, abdominal pain, hypermotility, diarrhea, colic or constipation, and black stool. Liver damage and renal failure have also been reported from iron poisoning. Pink urine discoloration is a strong indicator of iron poisoning. Iron poisoning may also affect behavior/Central Nervous System (somnolence -general depressed activity, seizures, irritability, lethargy, restlessness, drowsiness, hyporeflexia, confusion, coma), respiration, cardiovascular system (weak pulse, hypotension), metabolism (metabolic acidosis), and blood (leukocytosis). Chronic Potential Health Effects: Ingestion: Repeated high exposures may lead to iron build-up in the body (particularly in the liver, spleen, and lymphatic system) causing nausea, vomiting, stomach pain, constipation or diarrhea, black bowel movements, mild lethargy, irritability, leukocytosis, normocytic anemia, hemochromatosis in the Kupfer cells of the liver or in the reticuloendothelial cells of the bone marrow. Damage may occur to the spleen, lymphatic system, and liver (cirrhosis, hemosiderosis). Fibrosis or other damage may also occur to the pancreas. Symptoms may include hypoglycemia, hyperglycemia. Eyes: Prolonged eye contact may cause brownish discoloration of eyes. Toxicity information was extrapolated from Ferric Sulfate, Ferrous Sulfate, and Iron)

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 products of degradation are less toxic than the product itself.
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.

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 TSCA 8(b) inventory: Ferric subsulfate; Water

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).

Other Classifications **WHMIS (Canada)** Not controlled under WHMIS (Canada).

DSCL (EEC) Not Available Not Available

HMIS (U.S.A.)

Health Hazard	1
Fire Hazard	0
Reactivity	0
Personal Protection	B

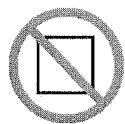
National Fire Protection Association (U.S.A.)

Health	1	0	Flammability
			Reactivity
			Specific hazard

WHMIS (Canada) (Pictograms)



DSCL (Europe) (Pictograms)



TDG (Canada) (Pictograms)



ADR (Europe)
(Pictograms)


Protective Equipment



Gloves (impervious).



Lab coat.



Not applicable.

Safety glasses.

Section 16. Other Information

MSDS Code

F3155

References

 -Manufacturer's Material Safety Data Sheet.
Some toxicity information was also extrapolated from Ferrous Sulfate

 Other Special
Considerations

Not available.

Validated by Sonia Owen on 10/30/2007.

Verified by Sonia Owen.

Printed 1/21/2008.

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.