



# Material Safety Data Sheet

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

Section 1. Chemical Product and Company Identification		Page Number: 1
Common Name/ Trade Name	Ferric Citrate	Catalog Number(s). YY1591, F1028
Manufacturer	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	CAS# 2338-05-8(anhydrous CAS no.)
Commercial Name(s)	Not available.	RTECS Not available.
Synonym	A combination of iron and citric acid; Citric acid, iron (3+) salt; 1,2,3-Propanetricarboxylic acid, 2-hydroxy-, iron salt; Iron Citrate; Iron (III) citrate hydrate; ferric citrate, n-hydrate; Iron(III) Citrate n-hydrate	TSCA TSCA 8(b) inventory: Listed as 1,2,3-Propanetricarboxylic acid, 2-hydroxy-, iron salt
Chemical Name	Ferric Citrate	CI# Not available.
Chemical Family	Not available.	<a href="#">IN CASE OF EMERGENCY</a> <a href="#">CHEMTREC (24hr) 800-424-9300</a>  CALL (310) 516-8000
Chemical Formula	Fe(C <sub>6</sub> H <sub>5</sub> O <sub>7</sub> ).xH <sub>2</sub> 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 <sup>3</sup> )	STEL (mg/m <sup>3</sup> )	CEIL (mg/m <sup>3</sup> )	% by Weight
1) Ferric Citrate	2338-05-8(anhydrous CAS no.)				100
<b>Toxicological Data on Ingredients</b> <p><b>Ferric Citrate (anhydrous):</b>  ORAL (LD50): Acute: 1487 mg/kg [Rat]. 1520 mg/kg [Mouse].  DERMAL (LD50): Acute: 2000 mg/kg [Rabbit].</p>					

Section 3. Hazards Identification	
Potential Acute Health Effects	Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.
Potential Chronic Health Effects	<b>CARCINOGENIC EFFECTS:</b> Not available. <b>MUTAGENIC EFFECTS:</b> Not available. <b>TERATOGENIC EFFECTS:</b> Not available. <b>DEVELOPMENTAL TOXICITY:</b> Not available. The substance may be toxic to liver. Repeated or prolonged exposure to the substance can produce target organs damage.

**Section 4. First Aid Measures**

<b>Eye Contact</b>	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.
<b>Skin Contact</b>	Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used.
<b>Serious Skin Contact</b>	Not available.
<b>Inhalation</b>	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
<b>Serious Inhalation</b>	Not available.
<b>Ingestion</b>	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.
<b>Serious Ingestion</b>	Not available.

**Section 5. Fire and Explosion Data**

<b>Flammability of the Product</b>	May be combustible at high temperature.
<b>Auto-Ignition Temperature</b>	Not available.
<b>Flash Points</b>	Not available.
<b>Flammable Limits</b>	Not available.
<b>Products of Combustion</b>	These products are carbon oxides (CO, CO <sub>2</sub> ). Some metallic oxides.
<b>Fire Hazards in Presence of Various Substances</b>	Slightly flammable to flammable in presence of heat.
<b>Explosion Hazards in Presence of Various Substances</b>	Slightly explosive in presence of open flames and sparks. Non-explosive in presence of shocks.
<b>Fire Fighting Media and Instructions</b>	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.
<b>Special Remarks on Fire Hazards</b>	As with most organic solids, fire is possible at elevated temperatures
<b>Special Remarks on Explosion Hazards</b>	Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

**Section 6. Accidental Release Measures**

<b>Small Spill</b>	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.
<b>Large Spill</b>	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.

**Section 7. Handling and Storage**

<b>Precautions</b>	Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents.
<b>Storage</b>	Keep container tightly closed. Keep container in a cool, well-ventilated area. Sensitive to light. Store in light-resistant containers.

### Section 8. Exposure Controls/Personal Protection

<b>Engineering Controls</b>	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.
<b>Personal Protection</b>	Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.
<b>Personal Protection in Case of a Large Spill</b>	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.
<b>Exposure Limits</b>	<p>TWA: 1 (mg(Fe)/m<sup>3</sup>) from ACGIH (TLV) [United States]  TWA: 1 (mg(Fe)/m<sup>3</sup>) from NIOSH [United States]  TWA: 1 STEL: 2 (mg(Fe)/m<sup>3</sup>) [Canada]  TWA: 1 STEL: 2 (mg(Fe)/m<sup>3</sup>) [United Kingdom (UK)]</p> <p>Consult local authorities for acceptable exposure limits.</p>

### Section 9. Physical and Chemical Properties

<b>Physical state and appearance</b>	Solid. (Powdered solid.)	<b>Odor</b>	Not available.
<b>Molecular Weight</b>	244.95 g/mole + xH <sub>2</sub> O	<b>Taste</b>	Not available.
<b>pH (1% soln/water)</b>	Not available.	<b>Color</b>	pale-brown or grayish-brown
<b>Boiling Point</b>	Not available.		
<b>Melting Point</b>	Not available.		
<b>Critical Temperature</b>	Not available.		
<b>Specific Gravity</b>	Not available.		
<b>Vapor Pressure</b>	Not applicable.		
<b>Vapor Density</b>	Not available.		
<b>Volatility</b>	Not available.		
<b>Odor Threshold</b>	Not available.		
<b>Water/Oil Dist. Coeff.</b>	Not available.		
<b>Ionicity (in Water)</b>	Not available.		
<b>Dispersion Properties</b>	See solubility in water.		
<b>Solubility</b>	<p>Easily soluble in hot water.  Soluble in cold water.  Slowly, but completely soluble in cold water.  Readily soluble in hot water.  Insoluble in alcohol.</p>		

### Section 10. Stability and Reactivity Data

<b>Stability</b>	The product is stable.
<b>Instability Temperature</b>	Not available.
<b>Conditions of Instability</b>	Excess heat, incompatible materials, dust generation, light
<b>Incompatibility with various substances</b>	Reactive with oxidizing agents.
<b>Corrosivity</b>	Not available.
<b>Special Remarks on Reactivity</b>	Sensitive to light.

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<b>Special Remarks on Corrosivity</b>	Not available.	
<b>Polymerization</b>	Will not occur.	

<b>Section 11. Toxicological Information</b>		
<b>Routes of Entry</b>	Inhalation. Ingestion.	
<b>Toxicity to Animals</b>	Acute oral toxicity (LD50): 1487 mg/kg [Rat]. Acute dermal toxicity (LD50): 2000 mg/kg [Rabbit].	
<b>Chronic Effects on Humans</b>	May cause damage to the following organs: liver.	
<b>Other Toxic Effects on Humans</b>	Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.	
<b>Special Remarks on Toxicity to Animals</b>	Not available.	
<b>Special Remarks on Chronic Effects on Humans</b>	Not available.	
<b>Special Remarks on other Toxic Effects on Humans</b>	Acute Potential Health Effects: Skin: May cause skin irritation. Eyes: May cause eye irritation. Inhalation: This material may produce dust. May cause upper respiratory tract (nose, throat) irritation. Symptoms may include coughing, sore throat, labored breathing and chest pain. Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Ingestion: Swallowing small amounts during normal handling is not likely to cause harmful effects. Swallowing large amounts of iron may be harmful and may cause gastrointestinal upset (nausea, vomiting, diarrhea) and may also affect the liver. Furthermore, pink urine is a strong indicator of iron poisoning. Chronic Potential Health Effects: Ingestion: Prolonged or repeated ingestion of large quantities may cause liver damage.	

<b>Section 12. Ecological Information</b>		
<b>Ecotoxicity</b>	Not available.	
<b>BOD5 and COD</b>	Not available.	
<b>Products of Biodegradation</b>	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.	
<b>Toxicity of the Products of Biodegradation</b>	The product itself and its products of degradation are not toxic.	
<b>Special Remarks on the Products of Biodegradation</b>	Not available.	

<b>Section 13. Disposal Considerations</b>		
<b>Waste Disposal</b>	Waste must be disposed of in accordance with federal, state and local environmental control regulations.	

<b>Section 14. Transport Information</b>		
<b>DOT Classification</b>	Not a DOT controlled material (United States).	
<b>Identification</b>	Not applicable.	
<b>Special Provisions for Transport</b>	Not applicable.	

**DOT (Pictograms)**



**Section 15. Other Regulatory Information and Pictograms**

**Federal and State Regulations**

Rhode Island RTK hazardous substances: Listed as Iron soluble salts  
 Pennsylvania RTK: Listed as Iron salts  
 Minnesota: Listed as Iron soluble salts  
 California Director's List of Hazardous Substances: Listed as Iron soluble salts  
 TSCA 8(b) inventory: Ferric Citrate

**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).  
 EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances (EINECS No. 219-045-4).  
 Canada: Listed on Canadian Domestic Substance List (DSL).  
 China: Not listed on National Inventory.  
 Japan: Listed on National Inventory (ENCS).  
 Korea: Not listed on National Inventory (KECI).  
 Philippines: Listed on National Inventory (PICCS).  
 Australia: Listed on AICS.

**Other Classifications**

**WHMIS (Canada)** Not controlled under WHMIS (Canada).  
**DSCL (EEC)** This product is not classified according to the EU regulations. Not applicable.

**HMIS (U.S.A.)**

Health Hazard	1
Fire Hazard	1
Reactivity	0
Personal Protection	E

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

Health	1	1	0	Flammability
	1			Reactivity
				Specific hazard

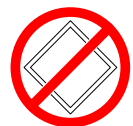
**WHMIS (Canada) (Pictograms)**



**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.



Safety glasses.

### Section 16. Other Information

**MSDS Code** F3120

**References** Not available.

**Other Special Considerations** Not available.

Validated by Sonia Owen on 7/19/2011.

Verified by Sonia Owen.

Printed 7/19/2011.

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.*