



Material Safety Data Sheet Ferric Chloride Solutions

Section 1 - Chemical Product and Company Identification

MSDS Name:

Ferric Chloride Solutions

Catalog Numbers:

LC14300, LC14380

Synonyms:**Company Identification:**LabChem Inc
200 William Pitt Way
Pittsburgh, PA 15238**Company Phone Number:**

(412) 826-5230

Emergency Phone Number:

(800) 424-9300

CHEMTREC Phone Number:

(800) 424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	Percent
7732-18-5	Water	balance
10025-77-1	Ferric chloride, hexahydrate	0.025-72

Section 3 - Hazards Identification

Emergency Overview

Appearance: *Yellow-orange to dark brown liquid***Caution!** May cause irritation or burns by all exposure routes. Harmful if swallowed. May cause liver and kidney damage. May cause central nervous system depression. May cause cardiac disturbances.**Target Organs:** *Kidneys, central nervous system, liver.*

Potential Health Effects

Eye:

May cause eye irritation or burns.

Skin:

May cause skin irritation or burns.

Ingestion:

Harmful if swallowed. May cause gastrointestinal tract irritation or burns with nausea, vomiting, diarrhea, and hemorrhage. May cause delayed effects including cardiovascular disturbances, liver and kidney damage, cerebral swelling, and coma.



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Inhalation:

May cause respiratory tract irritation.

Chronic:

May cause dermatitis and conjunctivitis. Repeated exposure may cause central nervous system damage, increase iron levels in the liver, spleen, and lymphatic system, and cause liver and spleen damage.

Section 4 - First Aid Measures

Eyes:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids until no evidence of chemical remains. Get medical aid at once.

Skin:

Get medical aid. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Remove contaminated clothing and shoes.

Ingestion:

Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation:

Give artificial respiration if necessary. Get medical aid. Keep victim warm, at rest. Move victim to fresh air. Do not use mouth-to-mouth resuscitation.

Notes to Physician:

Treat symptomatically and supportively.

Antidote:

The use of Deferoxamine as a chelating agent should be determined only by qualified medical personnel.

Section 5 - Fire Fighting Measures

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Negligible fire and explosion hazard when exposed to heat or flame. Move container if possible; avoid breathing vapors or dust. Avoid corrosive vapors or hydrogen chloride formed by thermal decomposition.

Extinguishing Media:

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

Autoignition Temperature:

Not applicable.

Flash Point:

Not applicable.

NFPA Rating:

CAS# 7732-18-5: H-0; F-0; I-0.

CAS# 10025-77-1: H-3; F-0; I-1.

Explosion Limits:

Lower: n/a Upper: n/a



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Section 6 - Accidental Release Measures

General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spills with absorbent (vermiculite, sand, fuller's earth), and place in plastic bags for later disposal.

Section 7 - Handling and Storage

Handling:

Wash thoroughly after handling. Avoid breathing dust, vapor, mist, or gas. Do not get on skin or in eyes. Do not ingest or inhale. Use with adequate ventilation.

Storage:

Do not store in metal containers. Store in glass or approved plastic containers only. Store tightly closed in a cool, dry area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Facilities storing or using this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits:

Chemical Name:	ACGIH	NIOSH	OSHA
Water	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.
Ferric chloride, hexahydrate	1 mg/m3 (as Fe) (listed under Iron salts, soluble)	1 mg/m3 (as Fe) (listed under Iron salts, soluble)	None of the components are on this list.

OSHA Vacated PELs:

None.

Personal Protective Equipment**Eyes:**

Do not wear contact lenses when working with chemicals. An eye wash fountain should be available in the immediate work area. Wear splash-proof safety goggles.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29CFR 1910.134. Always use a NIOSH-approved respirator when necessary.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Color: Yellow-orange to dark brown



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Odor:	Odorless to slight hydrochloric
pH:	2 (0.1 M aq.)
Vapor Pressure:	No information found.
Vapor Density:	No information found.
Evaporation Rate:	No information found.
Viscosity:	No information found.
Boiling Point:	No information found.
Freezing/Melting Point:	No information found.
Decomposition Temperature:	No information found.
Solubility in water:	Soluble.
Specific Gravity/Density:	No information found.
Molecular Formula:	No information found.
Molecular Weight:	No information found.

Section 10 - Stability and Reactivity

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible materials.

Incompatibilities with Other Materials:

Metals, allyl chloride, oxidizing agents, ethylene oxide.

Hazardous Decomposition Products:

Hydrogen chloride, chlorine, oxides of iron.

Hazardous Polymerization:

Has not been reported.

Section 11 - Toxicological Information

RTECS:

CAS# 7732-18-5: ZC0110000.

CAS# 10025-77-1: NO5425000.

LD50/LC50:

CAS# 7732-18-5:

Oral, rat: LD50 = >90 mL/kg.

CAS# 10025-77-1:

No information found.

Carcinogenicity:

CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 10025-77-1: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

Epidemiology:

Ferric chloride, hexahydrate is an eye, mucous membrane, and skin irritant; poisoning affects digestive tract, respiratory, cardiovascular, and central nervous systems, liver and kidneys.

Teratogenicity:

No information found.

Reproductive:

No information found.



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Mutagenicity:

No information found.

Neurotoxicity:

No information found.

Section 12 - Ecological Information

No information found.

Section 13 - Disposal Considerations

Dispose of in accordance with Federal, State, and local regulations.

Section 14 - Transport Information

US DOT

>2%

<2%

Shipping Name: Ferric chloride, solution

Not regulated.

Hazard Class: 8

UN Number: UN2582

Packing Group: PG III

Section 15 - Regulatory Information

US Federal**TSCA:**

CAS# 7732-18-5 is listed on the TSCA Inventory.

CAS# 10025-77-1 is not on the TSCA Inventory; however, its anhydrous form is on the inventory, and so this hydrate is exempt from TSCA Inventory requirements (40CFR270.3(u)(2)).

SARA Reportable Quantities (RQ):

None of the components are on this list.

CERCLA/SARA Section 313:

None of the components are on this list.

OSHA - Highly Hazardous:

None of the components are on this list.

US State**State Right to Know:**

CAS# 10025-77-1 can be found on the following state Right-to-Know lists: California (listed as Iron salts, soluble), Pennsylvania (listed as Iron salts, soluble), Minnesota (listed as Iron salts, soluble).

California Regulations:

None.



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European/International Regulations

Canadian DSL/NDSL:

CAS# 7732-18-5 is listed on Canada's DSL List.

CAS# 10025-77-1 is not listed on Canada's DSL or NDSL Lists.

Canada Ingredient Disclosure List:

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

CAS# 10025-77-1 is not listed on Canada's Ingredient Disclosure List.

Section 16 - Other Information

MSDS Creation Date: November 18, 1997

Revision Date: June 19, 2008

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