

Material Safety Data Sheet

Iron (III) Chloride Solution (40%)

MSDS# 09756

Section 1 - Chemical Product and Company Identification

MSDS Name: Iron (III) Chloride Solution (40%)

Catalog Numbers: SI115-1

Synonyms:

Company Identification: Fisher Scientific  
One Reagent Lane  
Fair Lawn, NJ 07410

For information in the US, call: 201-796-7100

Emergency Number US: 201-796-7100

CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

-----  
Risk Phrases:

CAS#: 7705-08-0

Chemical Name: Iron (III) Chloride

#: 40

EINECS#: 231-729-4

Hazard Symbols:

-----  
Risk Phrases:

CAS#: 7732-18-5

Chemical Name: Water

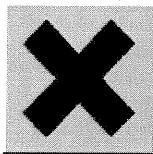
#: 60

EINECS#: 231-791-2

Hazard Symbols:

-----  
Text for R-phrases: see Section 16

Hazard Symbols: XI



Risk Phrases: 36/38

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Warning! Harmful if swallowed. May cause respiratory and digestive tract irritation. May cause liver and kidney damage. May cause blood abnormalities. Causes eye and skin irritation and possible burns. Target Organs: Blood, kidneys, liver.

Potential Health Effects

Eye: Contact produces irritation, tearing, and burning pain. Causes eye irritation and possible burns.

Skin: May be absorbed through the skin. Causes skin irritation and possible burns.

Ingestion: May cause irritation of the digestive tract. May cause severe irritation of the mouth and throat. May cause low blood pressure, rapid heartbeat, skin discoloration, and possible coma.

Inhalation: May cause respiratory tract irritation.

Prolonged or repeated exposure may cause adverse reproductive effects. May cause liver and kidney damage.

Chronic: Repeated exposure may increase iron levels in the liver, spleen and lymphatic system. Damage may occur in the spleen and liver.

#### Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: 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: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician:

#### 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. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Media: Use extinguishing media most appropriate for the surrounding fire. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Autoignition Temperature: Not applicable.

Flash Point: Not applicable.

Explosion Limits: Not available  
Lower:

Explosion Limits: Not available  
Upper:

NFPA Rating: health: 2; flammability: 0; instability: 0;

#### Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

#### Section 7 - Handling and Storage

Remove contaminated clothing and wash before reuse. Avoid breathing dust, mist, or vapor. Avoid contact with Handling: eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Use with adequate ventilation.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

#### Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Iron (III) Chloride	1 mg/m3 TWA (as Fe) (listed under Iron salts (soluble)).	1 mg/m3 TWA (as Fe) (listed under Iron salts (soluble)).	none listed
Water	none listed	none listed	none listed

OSHA Vacated PELs: Iron (III) Chloride: 1 mg/m3 TWA (as Fe) (listed under Iron salts (soluble)) Water: None listed

Engineering Controls:

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

## Exposure Limits

### Personal Protective Equipment

- Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
- Skin: Wear appropriate protective gloves to prevent skin exposure.
- Clothing: Wear appropriate protective clothing to prevent skin exposure.
- Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

### Section 9 - Physical and Chemical Properties

Physical State: Liquid  
Color: dark brown  
Odor: Not available  
pH: Not available  
Vapor Pressure: Not available  
Vapor Density: 1.45  
Evaporation Rate: Not available  
Viscosity: Not available  
Boiling Point: Not available  
Freezing/Melting Point: Not available  
Decomposition Temperature: Not available  
Solubility in water: Soluble in water.  
Specific Gravity/Density:  
Molecular Formula:  
Molecular Weight:

### Section 10 - Stability and Reactivity

- Chemical Stability: Stable under normal temperatures and pressures.
- Conditions to Avoid: Incompatible materials, excess heat.
- Incompatibilities with Other Materials: Metals, strong oxidizing agents, allyl chloride, potassium, sodium, epichlorohydrin.
- Hazardous Decomposition Products: Hydrogen chloride, chlorine, chlorine.
- Hazardous Polymerization: Has not been reported.

### Section 11 - Toxicological Information

- RTECS#: CAS# 7705-08-0: LJ9100000  
CAS# 7732-18-5: ZC0110000  
RTECS:  
CAS# 7705-08-0: Oral, mouse: LD50 = 200 mg/kg;  
Oral, rat: LD50 = 316 mg/kg;
- LD50/LC50: .  
RTECS:  
CAS# 7732-18-5: Oral, rat: LD50 = >90 mL/kg;  
.
- Carcinogenicity: Iron (III) Chloride - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.  
Water - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
- Other: No information found.

### Section 12 - Ecological Information

- Ecotoxicity: Water flea Daphnia: TLm = 15 ppm; 96 Hr; fresh water  
Fish: Striped bass: LC50 = 6 mg/L; 24-96 Hr; Static bioassay (as iron)  
Fish: Striped bass: LC50 = 4 mg/L; 24-96 Hr; Static bioassay (as iron)

### Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

### Section 14 - Transport Information

US DOT  
Shipping Name: FERRIC CHLORIDE, SOLUTION  
Hazard Class: 8  
UN Number: UN2582  
Packing Group: III  
Canada TDG  
Shipping Name: FERRIC CHLORIDE SOLUTION  
Hazard Class: 8  
UN Number: UN2582  
Packing Group: III

USA RQ: CAS# 7705-08-0: 1000 lb final RQ; 454 kg final RQ

#### Section 15 - Regulatory Information

##### European/International Regulations

###### European Labeling in Accordance with EC Directives

Hazard Symbols: XI

Risk Phrases:

R 36/38 Irritating to eyes and skin.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 28 After contact with skin, wash immediately with...

##### WGK (Water Danger/Protection)

CAS# 7705-08-0: 1

CAS# 7732-18-5: Not available

##### Canada

CAS# 7705-08-0 is listed on Canada's DSL List

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

Canadian WHMIS Classifications: E

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 7705-08-0 is not listed on Canada's Ingredient Disclosure List.

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

##### US Federal

###### TSCA

CAS# 7705-08-0 is listed on the TSCA Inventory.

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

**REVIEWED**

##### Section 16 - Other Information

MSDS Creation Date: 7/07/1999

Revision #5 Date 7/20/2009

DATE: July 20/2012  
*Chamberford*

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.