

MSDS# 09740

Section 1 - Chemical Product and Company Identification

MSDS Name: Iron (III) Chloride Anhydrous

Catalog Numbers: AC169430000, AC169430010, AC169430025, AC169430050, AC410550000, AC410550050  
AC410550050, AC410555000, 189-500

Synonyms: Ferric chloride; Iron (III) chloride; Iron sesquichloride; Iron trichloride

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

-----  
CAS#: 7705-08-0  
Chemical Name: Iron (III) chloride  
%: 95-100  
EINECS#: 231-729-4  
-----

Hazard Symbols: C



Risk Phrases: 22 34

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Danger! Harmful if swallowed. May cause adverse reproductive effects based upon animal studies. May cause liver and kidney damage. Causes burns by all exposure routes. Target Organs: Kidneys, liver, cardiovascular system.

Potential Health Effects

Eye: Causes eye burns.  
Skin: Causes skin burns.  
Ingestion: Harmful if swallowed. Causes gastrointestinal tract burns.  
Inhalation: Causes chemical burns to the respiratory tract.  
Chronic: Effects may be delayed.

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 immediately. Do NOT allow victim to rub eyes or keep eyes closed.  
Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.  
Ingestion: Get medical aid immediately. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.  
Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

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

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam.

Autoignition Temperature: Not applicable.

Flash Point: Not applicable.

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

NFPA Rating: health: 3; flammability: 0; instability: 1;

### Section 6 - Accidental Release Measures

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

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

### Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use only in a well-ventilated area. Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not ingest or inhale. Use only in a chemical fume hood. Keep from contact with moist air and steam.

Storage: Keep container closed when not in use. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Corrosives area. Store protected from moisture.

### 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

OSHA Vacated PELs: Iron (III) chloride: 1 mg/m3 TWA (as Fe) (listed under Iron salts (soluble))

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. Use only under a chemical fume hood.

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. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

## Section 9 - Physical and Chemical Properties

Physical State: Powder

Color: dark gray to black or brown

Odor: odorless

pH: 2.0 (0.1M aq. sol.)

Vapor Pressure: 1 hPa @20 deg C

Vapor Density: 5.61

Evaporation Rate: Negligible

Viscosity: Not available

Boiling Point: 316 deg C @760mmHg ( 600.80°F)

Freezing/Melting Point: 300 deg C (decom)

Decomposition Temperature:

Solubility in water: 920 g/l (20°C)

Specific Gravity/Density: 2.9 (water=1)

Molecular Formula: Cl<sub>3</sub>Fe

Molecular Weight: 162.206

## Section 10 - Stability and Reactivity

Chemical Stability:	Hygroscopic: absorbs moisture or water from the air.
Conditions to Avoid:	Incompatible materials, dust generation, excess heat, exposure to moist air or water.
Incompatibilities with Other Materials	Strong oxidizing agents, alkali metals, allyl chloride, ethylene oxide, potassium, sodium.
Hazardous Decomposition Products	Hydrogen chloride, oxides of iron.
Hazardous Polymerization	Has not been reported.

## Section 11 - Toxicological Information

RTECS#:	CAS# 7705-08-0: LJ9100000
	RTECS:
LD50/LC50:	CAS# 7705-08-0: Oral, mouse: LD50 = 200 mg/kg; Oral, rat: LD50 = 316 mg/kg;
	.
Carcinogenicity:	Iron (III) chloride - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Other:	See actual entry in RTECS for complete information.

## Section 12 - Ecological Information

	Water flea Daphnia: TLm = 15 ppm; 96 Hr; fresh water
Ecotoxicity:	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)
Other:	Do not empty into drains.

## 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, ANHYDROUS

Hazard Class: 8

UN Number: UN1773

Packing Group: III

Canada TDG

Shipping Name: FERRIC CHLORIDE ANHYDROUS

Hazard Class: 8

UN Number: UN1773

Packing Group: III

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: C

Risk Phrases:

R 22 Harmful if swallowed.

R 34 Causes burns.

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...

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 7705-08-0: 1

Canada

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

Canadian WHMIS Classifications: E, D1B

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.

US Federal

TSCA

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

Section 16 - Other Information

MSDS Creation Date: 7/07/1999

Revision #9 Date 7/20/2009

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.

-----