

Material Safety Data Sheet

Version 4.0
Revision Date 07/24/2010
Print Date 09/29/2010

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Iron(II) chloride
Product Number : 372870
Brand : Aldrich
Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA
Telephone : +18003255832
Fax : +18003255052
Emergency Phone # : (314) 776-6555

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Toxic by ingestion, Corrosive

GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H401 Toxic to aquatic life.

Precautionary statement(s)

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/ physician.

HMIS Classification

Health hazard: 3
Flammability: 0
Physical hazards: 0

NFPA Rating

Health hazard: 3
Fire: 0
Reactivity Hazard: 0

Potential Health Effects

Inhalation May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin May be harmful if absorbed through skin. Causes skin burns.
Eyes Causes eye burns.
Ingestion Toxic if swallowed. Causes burns.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Aldrich - 372870
Delivery 0836731386-000020 Purchase Order CCS-9286

Page 1 of 6

Synonyms : Ferrous chloride

Formula : Cl₂Fe

Molecular Weight : 126.75 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
Iron dichloride			
7758-94-3	231-843-4	-	-

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Continue rinsing eyes during transport to hospital. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.

Handle and store under inert gas. Air and moisture sensitive.

RECEIVED
OCT 05 2010
Safety & Environment
Health

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves.

Eye protection

Face shield and safety glasses

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form solid

Safety data

pH	no data available
Melting point	677 °C (1,251 °F) - lit.
Boiling point	1,023 °C (1,873 °F)
Flash point	not applicable
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Density	3.16 g/cm ³ at 25 °C (77 °F)
Water solubility	no data available

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Conditions to avoid

Air sensitive. Avoid moisture.

Materials to avoid

Strong oxidizing agents, Forms shock-sensitive mixtures with certain other materials., Potassium, Sodium/sodium oxides

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Hydrogen chloride gas, Iron oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 Oral - rat - 450 mg/kg

Skin corrosion/irritation

Aldrich - 372870
Delivery 0836731386-000020 Purchase Order CCS-9286

Page 3 of 6

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

Genotoxicity in vitro - Hamster - Embryo
Morphological transformation.

Carcinogenicity

IARC:	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP:	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Ingestion	Toxic if swallowed. Causes burns.
Skin	May be harmful if absorbed through skin. Causes skin burns.
Eyes	Causes eye burns.

Signs and Symptoms of Exposure

Cough, Shortness of breath, Headache, Nausea, Vomiting

Additional Information

RTECS: NO5400000

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish	LC50 - Morone saxatilis - 4 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates.	EC50 - Daphnia magna (Water flea) - 17 mg/l - 64 h

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

Aldrich - 372870
Delivery 0836731386-000020 Purchase Order CCS-9286

Page 4 of 6

no data available

Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS

Product

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN-Number: 3260 Class: 8 Packing group: III
Proper shipping name: Corrosive solid, acidic, inorganic, n.o.s. (Iron dichloride)
Reportable Quantity (RQ): 100 lbs
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG

UN-Number: 3260 Class: 8 Packing group: III EMS-No: F-A, S-B
Proper shipping name: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Iron dichloride)
Marine pollutant: No

IATA

UN-Number: 3260 Class: 8 Packing group: III
Proper shipping name: Corrosive solid, acidic, inorganic, n.o.s. (Iron dichloride)

15. REGULATORY INFORMATION

OSHA Hazards

Toxic by ingestion, Corrosive

DSL Status

All components of this product are on the Canadian DSL list.

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date
Iron dichloride	7758-94-3	1993-04-24

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Iron dichloride	7758-94-3	1993-04-24

New Jersey Right To Know Components

	CAS-No.	Revision Date
Iron dichloride	7758-94-3	1993-04-24

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Aldrich - 372870
Delivery 0836731386-000020 Purchase Order CCS-9286

Page 5 of 6

16. OTHER INFORMATION

Further Information

Copyright 2010 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Co., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

RECEIVED
OCT 05 2010
Safety & Environmental
Health

Aldrich - 372870
Delivery 0836731386-000020 Purchase Order CCS-9286

Page 6 of 6

00000542

