

SAFETY DATA SHEET

according to Regulation (EU) No. 1907/2006
Version 3.0 Revision Date 14.07.2007
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1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product name : **Iron(III) chloride**

Product Number : 12321
Brand : Riedel

Company : Sigma-Aldrich Company Ltd.
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2. HAZARDS IDENTIFICATION

Risk advice to man and the environment

Harmful if swallowed. Irritating to skin. Risk of serious damage to eyes.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Ferric chloride

Formula : FeCl₃
Molecular Weight : 162.21 g/mol

CAS-No.	EC-No.	Index-No.	Classification	Concentration [%]
Iron trichloride				
7705-08-0	231-729-4	-	Xn, R22- R38- R41	-

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

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

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

Further information

The product itself does not burn.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.

Environmental precautions

Do not let product enter drains.

Methods for cleaning up

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

7. HANDLING AND STORAGE

Handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Storage

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Store under inert gas.

hygroscopic

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
Iron trichloride	7705-08-0	STEL	2 mg/m ³	1997-01-01	UK. Health and Safety Commission, EH 40/2005, Workplace exposure limits
		TWA	1 mg/m ³	1997-01-01	UK. Health and Safety Commission, EH 40/2005, Workplace exposure limits

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it.

Eye protection

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
Colour no data available

Safety data

pH no data available
Melting point 304 °C
Boiling point no data available
Flash point no data available
Ignition temperature no data available
Lower explosion limit no data available
Upper explosion limit no data available
Vapour pressure < 1 hPa at 20 °C
 1 hPa at 194 °C
Density 2.800 g/cm³
Water solubility no data available
Vapour density 5.60
 - (Air = 1.0)

10. STABILITY AND REACTIVITY

Storage stability

Stable under recommended storage conditions.

Materials to avoid

Strong oxidizing agents, Forms shock-sensitive mixtures with certain other materials., Sodium/sodium oxides, Potassium, Alkali metals, Bases, Exothermic in contact with water

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

Irritation and corrosion

Skin - rabbit - Skin irritation

Eyes - rabbit - Severe eye irritation

Sensitisation

no data available

Chronic exposure

no data available

Signs and Symptoms of Exposure

spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, Overdose of iron compounds may have a corrosive effect on the gastrointestinal mucosa and be followed by necrosis, perforation, and stricture formation. Several hours may elapse before symptoms that can include epigastric pain, diarrhea, vomiting, nausea, and hematemesis occur. After apparent recovery a person may experience metabolic acidosis, convulsions, and coma hours or days later. Further complications may develop leading to acute liver necrosis that can result in death due to hepatic coma., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Potential Health Effects

Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes severe eye irritation.
Ingestion	Harmful if swallowed.

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

no data available

Ecotoxicity effects

Toxicity to fish	LC50 - Pimephales promelas (fathead minnow) - 21.84 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates.	EC50 - Daphnia magna (Water flea) - 9.6 mg/l - 48 h

Further information on ecology

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.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

ADR/RID

UN-Number: 1773 Class: 8 Packing group: III
Proper shipping name: FERRIC CHLORIDE, ANHYDROUS

IMDG

UN-Number: 1773 Class: 8 Packing group: III EMS-No: F-A, S-B
Proper shipping name: FERRIC CHLORIDE, ANHYDROUS
Marine pollutant: No

IATA

UN-Number: 1773 Class: 8 Packing group: III
Proper shipping name: Ferric chloride, anhydrous

15. REGULATORY INFORMATION

Labelling according to EC Directives

Hazard symbols

Xn Harmful

R-phrases(s)

R22 Harmful if swallowed.

R38 Irritating to skin.

R41 Risk of serious damage to eyes.

S-phrases(s)

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S39 Wear eye/face protection.

16. OTHER INFORMATION

Further information

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