

SAFETY DATA SHEET

according to 1907/2006/EC, Article 3

Version no. : 2.0
Prepared on : 20.05.2026
Revised on : -

SECTION 1: Identification of the substance/mixture and of the company/undertaking.

1.1 Product identifiers

Product name Iron(III) chloride hexahydrate
Product Number PSR12952
Brand PureSynth research chemicals
CAS No. 10025-77-1

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals

1.3 Details of the supplier of the safety data sheet

Company PureSynth Research Chemicals GmbH.
64683 Einhausen Marie-Curie-Straße. 3, Germany

1.4 Emergency telephone number

Worldwide Helpline No.: 1800-8908-260

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Acute toxicity, Oral (Category 4), H302

Skin irritation (Category 2), H315

Serious eye damage (Category 1), H318

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word Danger

Hazard statement(s)

H302 Harmful if swallowed.

H318 Causes serious eye damage

H315 Causes skin irritation.

Precautionary statement(s)

P264 Wash skin thoroughly after handling

P280	Wear protective gloves/ eye protection/ face protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell
P302+P352	IF ON SKIN: Wash with plenty of water
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue Rinsing.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
Supplemental Hazard Statements	None

2.3 Other hazards:

This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher

SECTION 3: Composition / information on ingredients

3.1 Substances

Common names & Synonyms	Mol. formula	CAS number
Ferric chloride	Cl ₃ Fe • 6H ₂ O	10025-77-1
Component	Classification	Concentration
Iron trichloride hexahydrate	Acute Tox. 4; Skin Irrit. 2; Eye Dam. 1; H302, H315, H318 Concentration Limits :>= 1 %: Met. Corr. 1,H290	<= 100 %

SECTION 4: First aid measures

Description of first aid measures

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled	After inhalation: fresh air.
In case of skin contact	In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.
In case of eye contact	After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.
If swallowed	After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.
Most important symptoms and effects, both acute and delayed	The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
Indication of any immediate medical attention and special treatment needed	No data available

SECTION 5: Fire fighting measures

Extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Suitable extinguishing media	Hydrogen chloride gas
Special hazards arising from the substance or mixture	Iron oxides Not combustible. Ambient fire may liberate hazardous vapors.
Advice for fire-fighters	Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
Further information	Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures	Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, Consult an expert. For personal protection see section 8.
Environmental precautions	Do not let product enter drains.
Methods and materials for containment and cleaning up	Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemisorb®). Dispose of properly. Clean up affected area
Reference to other sections	For disposal see section 13.

SECTION 7: Handling and storage

Precautions for safe handling	For precautions see section 2.2.
Conditions for safe storage, including any incompatibilities	Storage class (TRGS 510): 13: Non Combustible Solids. Keep container tightly closed, dry. Recommended storage tempratue-room temperature.
Specific end use(s)	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls / Personal protection

Control parameters	No data available
Exposure controls	
Appropriate engineering controls	No data available
Personal protective equipment:	

Eye / face protection	Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses. Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Skin protection	The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it. If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.
Body Protection	protective clothing
Respiratory protection	Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.
Control of environmental exposure	Do not let product enter drains.

SECTION 9: Physical and chemical properties

Appearance	Form: Solid
Odour	No data available
pH - Value	No data available
Density	No data available
Boiling Point	280 - 285 °C
Melting Point	37 °C
Solubility in water	soluble
Flash point	No data available
Vapour pressure	No data available
Auto -ignition temperature	No data available
Vapour density	No data available
Flammability (solid, gas)	No data available
Evaporation rate	No data available
Partition coefficient: n- octanol / water	No data available
Viscosity	No data available
Explosive properties	No data available
Upper / lower flammability or explosive limits	No data available
Oxidizing properties	No data available

Other safety information: No data available

SECTION 10: Stability and reactivity

Reactivity	No data available
Chemical stability	The product is chemically stable under standard ambient conditions (room temperature).
Possibility of hazardous reactions	Risk of explosion with: Alkali metals Ethylene oxide
Condition to avoid	Exposure to moisture
Incompatible materials	Mild steel Metals
Hazardous decomposition products	In the event of fire: see section 5

SECTION 11: Toxicological information

Acute toxicity	LD50 Oral - Rat - 316 mg/kg Remarks: (RTECS) LD50 Dermal - Rat - male and female - > 2.000 mg/kg (OECD Test Guideline 402) Remarks: (in analogy to similar products)
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	The value is given in analogy to the following substances: iron dichloride
Skin corrosion/irritation	Skin - Rabbit Result: irritating Remarks: (IUCLID)
Serious eye damage/eye irritation	Eyes - Rabbit Result: Severe irritations (OECD Test Guideline 405)
Respiratory or skin sensitization	No data available Test Type: Ames test Method: OECD Test Guideline 471 Result: negative
Germ cell mutagenicity	Test Type: Mutagenicity (mammal cell test): micronucleus. Method: OECD Test Guideline 487 Result: negative Test Type: In vivo micronucleus test Species: Mouse Result: negative
Carcinogenicity	No data available
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	No data available
Specific target organ toxicity - repeated exposure	No data available
Aspiration hazard	No data available
Additional Information	No data available
Endocrine disrupting properties	Assessment- The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. Repeated dose toxicity - Rat - male - Oral - 98 d - NOAEL (No observed adverse effect level) - 277 mg/kg Remarks: Subchronic toxicity RTECS: NO5425000
Product:	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 epigastria 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.

SECTION 12: Ecological information

Toxicity	No data available
Persistence and degradability	No data available
Biodegradability	No data available
Bio accumulative potential	No data available
Mobility in soil	No data available
Results of PBT and vPvB assessment	This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at Levels of 0.1% or higher.
Endocrine disrupting properties	Assessment- The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Product:	Product reacts with water.
Other adverse effects	The following may develop after reaction of the product with water: hydrochloric acid Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

Waste treatment methods	No data available
Contaminated packaging	Dispose of as unused product.

SECTION 14: Transport information

	UN no.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
ADR / RID	-	Not dangerous goods	-	-	No
IMDG	-	Not dangerous goods	-	-	No
IATA	-	Not dangerous goods	-	-	No

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or

Stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

Chemical safety assessment

For this product a chemical safety assessment was not carried out.

SECTION 16: Other information

The information in this SDS 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. The user must be determined suitability of this information for his application.