

Chemical Safety Data Sheet

Section 1 IDENTIFICATION

Chemical product name and company identification

Composition/Composition Informatio

Chemical English name: ferric chloride anhydrous

Molecular formula: FeCl₃

Molecular weight: 162.21

Enterprise Name: Shandong Starki Chemical Co., Ltd

Address: Room 1109, Century Building, No. 39 Donghai West Road, Shinan District, Qingdao City, Shandong Province

Postal Code: 266071

Contact number: +86-532-86217298

Fax number: +86-532-866636698

Enterprise emergency hotline: +86-532-86217298

Recommended use: Mainly used for water purification, but also for printing, plate making, pigments, fuels, and pharmaceuticals.

Classification of the substance or mixture

Acute Toxicity (Oral) Category 4, Skin Corrosion/Irritation Category IC, Serious Eye Damage Category 1, Hazardous to the Aquatic Environment (Chronic) Category 3.

GHS Label elements, including precautionary statements:**Signal word:** Danger**Hazard statement(s):** Harmful if swallowed. Causes severe skin burns and eye damage. Harmful to aquatic life with long lasting effects.**Precautionary statement(s):****Prevention:**

Do not breathe dusts or mists. Wash ... thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/..

Response

IF SWALLOWED: Get medical help. Rinse mouth. Do NOT induce vomiting. IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get emergency medical help immediately. Specific treatment (see below). IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical help.

Storage

Store locked up

Disposal:

Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards which do not result in classification: /

Section 3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration%
Ferric chloride	7705-08-0	98.60%

Section 4 FIRTAID MEASURES**Description of necessary first aid measures**

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 Ingestion: Rinse mouth with water. Consult a physician.

Most important symptoms/effects, acute and delayed: /

Indication of immediate medical attention and special treatment needed, if necessary: /

SECTION 5 FIREFIGHTING MEASURES

Suitable extinguishing media: Foam. Dry chemical powder. Carbon dioxide. Water spray or fog- Large fires only.

Special hazards arising from the chemical: Non combustible. Not considered to be a significant fire risk. Acids may react with metals to produce hydrogen, a highly flammable and explosive gas. Heating may cause expansion or decomposition leading to violent rupture of containers. May emit corrosive, poisonous fumes. May emit acrid smoke.

Special protective actions for fire-fighters: Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Use fire fighting procedures suitable for surrounding area. Do not approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Remove all ignition sources. Clean up all spills immediately. Avoid contact with skin and eyes. Control personal contact with the substance, by using protective equipment.

Environmental precautions: Prevent, by any means available, spillage from entering drains or water courses

Methods and materials for containment and cleaning up: Minor Spills: Use dry clean up procedures and avoid generating dust. Place in a suitable, labelled container for waste disposal. Drains for storage or use areas should have retention basins for pH adjustments and dilution of spill before discharge or disposal of material. Major Spills: Stop leak if safe to do so. Contain spill with sand, earth or vermiculite. Collect recoverable product into labelled containers for recycling. Neutralise/decontaminate residue. Collect solid residues and seal in labelled drums for disposal. Wash area and prevent runoff into drains.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling: Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Avoid contact with moisture. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. Keep containers securely sealed when not in use. Avoid physical damage to containers.

Conditions for safe storage, including any incompatibilities: Store in original containers. Keep

containers securely sealed. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storage and handling recommendations contained within this SDS.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
ferric chloride	8.7 mg/m ³	30 mg/m ³	180 mg/m ³

Appropriate engineering controls:Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Supplied-air type respirator may be required in special circumstances.

Personal protective equipment

Eye/face protection:Safety glasses with side shields. Chemical goggles.

Skin protection:Wear chemical protective gloves, e.g. PVC. Wear safety footwear or safety gumboots, e.g. Rubber.

Respiratory protection:Particulate.

Thermal hazards:/

SECTION 9	PHYSICAL AND	CHEMICAL PROPERTIES
Physical state		Powder
Colour		Gray
Odour		/
Melting point/freezing point		/
Boiling point or initial boiling point and boiling range		315-319°C
Flammability		/
Lower and upper explosion limit/flammability limit		/
Flash point		/
Auto-ignition temperature		/
Decomposition temperature		/
pH		/
Kinematic viscosity		/
Solubility		Miscible
Partition coefficient:n-octanol/water(log value)		/
Vapour pressure (kPa)		0.13@194C
Density and/or relative density (Water=1)		2.90@25C
Relative vapour density		/
Particle characteristics		/

SECTION 10 STABILITY AND REACTIVITY

Reactivity:/

Chemical stability:Product is considered stable under normal handling conditions

Possibility of hazardous reactions:Hazardous polymerisation will not occur

Conditions to avoid: Spark, static electricity and high temperature.

Incompatible materials: Alkalies.

Hazardous decomposition products: hydrogen chloride, metal oxides

SECTION 11 TOXICOLOGICAL INFORMATION

Information on the likely routes of exposure: Inhaled, Ingestion, skin, eyes.

Symptoms related to the physical, chemical and toxicological characteristics: /

Acute health effects

Acidic corrosives produce respiratory tract irritation with coughing, choking and mucous membrane damage. The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion. The material can produce chemical burns following direct contact with the skin. The material can produce chemical burns to the eye following direct contact.

Chronic health effects: Repeated or prolonged exposure to acids may result in the erosion of teeth, inflammatory and ulcerative changes in the mouth and necrosis (rarely) of the jaw. Bronchial irritation, with cough, and frequent attacks of bronchial pneumonia may ensue. Gastrointestinal disturbances may also occur. Chronic exposures may result in dermatitis and/or conjunctivitis.

Numerical measures of toxicity (such as acute toxicity estimates):

dermal (rat) LD50: >881 mg/kg

Inhalation (Rat) LC50: >0.3 mg/14h

Oral (Rat) LD50: >139<558 mg/kg

SECTION 12 ECOLOGICAL INFORMATION

Toxicity:

Endpoint	Test Duration (hr)	Species	Value
NOEC (ECx)	504h	Fish	0.32mg/l
LC50	96h	Fish	>=10mg/l
EC50	48h	Crustacea	27.9mg/l

Persistence and degradability: Water/Soil: HIGH. Air: HIGH.

Bioaccumulative potential: HIGH (BCF=9622)

Mobility in soil: LOW (KOC=35.04)

Other adverse effects: /

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal methods: Recycle wherever possible or consult manufacturer for recycling options.

Consult Land Waste Authority for disposal. Bury or incinerate residue at an approved site. Recycle containers if possible, or dispose of in an authorised landfill.

Section 14 TRANSPORT INFORMATION

UN number: 1773.

UN proper shipping name: FERRIC CHLORIDE, ANHYDROUS.

Transport hazard class(es): 8

Packaging group:II Environmental hazards:/ Special precautions for user:/

Section 15 REGULATORY INFORMATION

Regulations: This safety data sheet is in compliance with the following national standards:GB/T 16483-2008, GB 13690-2009, GB/T 15098-2008, GB 18218-2018, GB 15258-2009, GB 6944-2012, GB 190-2009, GB/T 191-2008, GB 12268-2012, GBZ 2.1-2019 as well as the following national regulations: Dangerous Goods Transport Administrative Regulation, Dangerous Chemicals Safety Administrative Regulation.
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Section 16 OTHER INFORMATION

References	UN Recommendations on the Transport of Dangerous Goods Model Regulations UN Globally Harmonized System of Classification and Labelling of Chemicals
Form Date	11-January-2022

Note 1:When products contain two or more hazardous substances,Safety Data Sheets should be prepared based on the risk of the mixture.

Note 2:Manufacturer /supplier should ensure the correctness of the information contained inthe safety datasheets,and updated in atimely manner

Note 3:As a result of product features without the existence of certain information or no data available (such as boiling point does not exist for the solid)in the table with"/"logo.