

# SAFETY DATA SHEETS

According to the UN GHS revision 9

Version: 1.0  
Creation Date: July 15, 2019  
Revision Date: July 15, 2019

## SECTION 1: Identification

### 1.1 GHS Product identifier

**Product name** Iron trichloride

### 1.2 Other means of identification

**Product number** -

**Other names** Iron(III) chloride; Ferric chloride;

### 1.3 Recommended use of the chemical and restrictions on use

**Identified uses** Industrial and scientific research use.

**Uses advised against** no data available

### 1.4 Supplier's details

**Company** Shanghai Baishun Biotechnology Co., Ltd

**Address** No. 26, Lane 918, Lianye Road, Zhelin Town, Fengxian District, Shanghai, 201400, China

**Telephone** +86-21-37581181

### 1.5 Emergency phone number

**Emergency phone number** +86-21-37581181

**Service hours** Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours).

## SECTION 2: Hazard identification

### 2.1 Classification of the substance or mixture

Corrosive to metals, Category 1  
Acute toxicity - Category 4, Oral  
Skin irritation, Category 2  
Serious eye damage, Category 1

### 2.2 GHS label elements, including precautionary statements

**Pictogram(s)**



**Signal word**

**Hazard statement(s)**

Danger

H302 Harmful if swallowed

H315 Causes skin irritation

H318 Causes serious eye damage

**Precautionary statement(s)****Prevention**

P234 Keep only in original packaging.  
P264 Wash ... thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

**Response**

P390 Absorb spillage to prevent material damage.  
P301+P317 IF SWALLOWED: Get medical help.  
P330 Rinse mouth.  
P302+P352 IF ON SKIN: Wash with plenty of water/...  
P321 Specific treatment (see ... on this label).  
P332+P317 If skin irritation occurs: Get medical help.  
P362+P364 Take off contaminated clothing and wash it before reuse.  
P305+P354+P338 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P317 Get medical help.

**Storage**

P406 Store in a corrosion resistant/...container with a resistant inner liner.

**Disposal**

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**2.3 Other hazards which do not result in classification**

no data available

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**SECTION 3: Composition/information on ingredients****3.1 Substances**

| Chemical name    | Common names and synonyms | CAS number | EC number | Concentration |
|------------------|---------------------------|------------|-----------|---------------|
| Iron trichloride | Iron trichloride          | 7705-08-0  | 231-729-4 | 100%          |

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**SECTION 4: First-aid measures****4.1 Description of necessary first-aid measures****If inhaled**

Fresh air, rest. Refer for medical attention.

**Following skin contact**

Remove contaminated clothes. Rinse skin with plenty of water or shower.

**Following eye contact**

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

**Following ingestion**

Rinse mouth. Give one or two glasses of water to drink. Do NOT induce vomiting. Refer for medical attention .

**4.2 Most important symptoms/effects, acute and delayed**

no data available

**4.3 Indication of immediate medical attention and special treatment needed, if necessary**

no data available

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**SECTION 5: Fire-fighting measures****5.1 Suitable extinguishing media**

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

## **5.2 Specific hazards arising from the chemical**

Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.

## **5.3 Special protective actions for fire-fighters**

In case of fire in the surroundings, use appropriate extinguishing media.

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# **SECTION 6: Accidental release measures**

## **6.1 Personal precautions, protective equipment and emergency procedures**

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Sweep spilled substance into covered plastic containers. If appropriate, moisten first to prevent dusting.

## **6.2 Environmental precautions**

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

## **6.3 Methods and materials for containment and cleaning up**

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

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# **SECTION 7: Handling and storage**

## **7.1 Precautions for safe handling**

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

## **7.2 Conditions for safe storage, including any incompatibilities**

Separated from strong bases and incompatible materials. See Chemical Dangers. Dry. Well closed.

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# **SECTION 8: Exposure controls/personal protection**

## **8.1 Control parameters**

### **Occupational Exposure limit values**

no data available

### **Biological limit values**

no data available

## **8.2 Appropriate engineering controls**

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

## **8.3 Individual protection measures, such as personal protective equipment (PPE)**

### **Eye/face protection**

Wear safety goggles.

### **Skin protection**

Protective gloves.

### **Respiratory protection**

Use local exhaust or breathing protection.

#### **Thermal hazards**

no data available

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## **SECTION 9: Physical and chemical properties and safety characteristics**

|   |  |
|---|--|
| <b>Physical state</b>   | Solid. Hexagonal leaflets or plates. Very hygroscopic.   |
| <b>Colour</b>   | Dark, red by transmitted light, green by reflected light. Sometimes appears brownish black.  |
| <b>Odour</b>  | no data available  |
| <b>Melting point/freezing point</b>                             | 306 °C. Remarks:The atmospheric pressure at which this result was determined is not stated.  |
| <b>Boiling point or initial boiling point and boiling range</b> | 316 °C. Remarks:The atmospheric pressure at which this result was determined is not stated.  |
| <b>Flammability</b>   | no data available  |
| <b>Lower and upper explosion limit/flammability limit</b>       | no data available  |
| <b>Flash point</b>  | 51°C   |
| <b>Auto-ignition temperature</b>                                | Remarks:No exothermic reaction observed; Test item temperature not exceeded 200 °C (i.e. rise >60 °C above oven temperature); thus considered negative response; no changes in appearance of test item; test item considered 'not self-ignitable'. |
| <b>Decomposition temperature</b>                                | no data available  |
| <b>pH</b>   | 1.;1.  |
| <b>Kinematic viscosity</b>                                      | no data available  |
| <b>Solubility</b>   | Miscible with water  |
| <b>Partition coefficient n-octanol/water</b>                    | no data available  |
| <b>Vapour pressure</b>  | no data available  |
| <b>Density and/or relative density</b>                          | 2.898. Temperature:25 °C.  |
| <b>Relative vapour density</b>                                  | 5.61 (vs air)  |
| <b>Particle characteristics</b>                                 | no data available  |

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## **SECTION 10: Stability and reactivity**

### **10.1 Reactivity**

no data available

### **10.2 Chemical stability**

no data available

### **10.3 Possibility of hazardous reactions**

Decomposes above 200°C . This produces toxic and corrosive gases including chlorine and hydrogen chloride. Decomposes on contact with water. This produces hydrogen chloride. The solution in water is a medium strong acid. Reacts violently with alkali metals, allyl chloride, ethylene oxide, styrene and bases. This generates explosion hazard. Attacks metal. This produces flammable/explosive gas (hydrogen - see ICSC 0001).

### **10.4 Conditions to avoid**

no data available

### **10.5 Incompatible materials**

no data available

## 10.6 Hazardous decomposition products

no data available

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## SECTION 11: Toxicological information

### Acute toxicity

- Oral: no data available
- Inhalation: TLV - rat - 1 mg/m<sup>3</sup> air.
- Dermal: LD50 - rat (male/female) - > 2 000 mg/kg bw.

### Skin corrosion/irritation

no data available

### Serious eye damage/irritation

no data available

### Respiratory or skin sensitization

no data available

### Germ cell mutagenicity

no data available

### Carcinogenicity

no data available

### Reproductive toxicity

no data available

### STOT-single exposure

The substance is irritating to the eyes, skin and respiratory tract. Corrosive on ingestion.

### STOT-repeated exposure

no data available

### Aspiration hazard

Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed.

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## SECTION 12: Ecological information

### 12.1 Toxicity

- Toxicity to fish: no data available
- Toxicity to daphnia and other aquatic invertebrates: no data available
- Toxicity to algae: no data available
- Toxicity to microorganisms: NOEC - activated sludge - >= 200 - ca. 500 mg Fe/L in activated sludge in WWTP. Remarks:Iron.

### 12.2 Persistence and degradability

no data available

### 12.3 Bioaccumulative potential

no data available

### 12.4 Mobility in soil

no data available

### 12.5 Other adverse effects

no data available

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## SECTION 13: Disposal considerations

### 13.1 Disposal methods

#### Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

#### Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

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## SECTION 14: Transport information

### 14.1 UN Number

ADR/RID: UN1773 (For reference only, please check.)

IMDG: UN1773 (For reference only, please check.)

IATA: UN1773 (For reference only, please check.)

### 14.2 UN Proper Shipping Name

ADR/RID: FERRIC CHLORIDE, ANHYDROUS (For reference only, please check.)

IMDG: FERRIC CHLORIDE, ANHYDROUS (For reference only, please check.)

IATA: FERRIC CHLORIDE, ANHYDROUS (For reference only, please check.)

### 14.3 Transport hazard class(es)

ADR/RID: 8 (For reference only, please check.)

IMDG: 8 (For reference only, please check.)

IATA: 8 (For reference only, please check.)

### 14.4 Packing group, if applicable

ADR/RID: III (For reference only, please check.)

IMDG: III (For reference only, please check.)

IATA: III (For reference only, please check.)

### 14.5 Environmental hazards

ADR/RID: No

IMDG: No

IATA: No

### 14.6 Special precautions for user

no data available

### 14.7 Transport in bulk according to IMO instruments

no data available

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## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations specific for the product in question

| Chemical name  | Common names and synonyms | CAS number | EC number |
|--|---------------------------|------------|-----------|
| Iron trichloride   | Iron trichloride          | 7705-08-0  | 231-729-4 |
| European Inventory of Existing Commercial Chemical Substances (EINECS) |                           |            | Listed.   |
| EC Inventory   |                           |            | Listed.   |
| United States Toxic Substances Control Act (TSCA) Inventory            |                           |            | Listed.   |
| China Catalog of Hazardous chemicals 2015                              |                           |            | Listed.   |
| New Zealand Inventory of Chemicals (NZIoC)                             |                           |            | Listed.   |

|   |         |
|---|---------|
| <b>Philippines Inventory of Chemicals and Chemical Substances (PICCS)</b>       | Listed. |
| <b>Vietnam National Chemical Inventory</b>                                      | Listed. |
| <b>Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)</b> | Listed. |
| <b>Korea Existing Chemicals List (KECL)</b>                                     | Listed. |

## SECTION 16: Other information

### Information on revision

**Creation Date** July 15, 2019  
**Revision Date** July 15, 2019

### Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

### References

- IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>
- HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>
- IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>
- eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: [http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)
- CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>
- ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>
- ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>
- Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>
- ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

### Other Information

UN number 1773 corresponds to the anhydrous form; UN number 2582 corresponds to the solution. The apparent melting point caused by loss of crystal water is given.

**Any questions regarding this SDS, Please send your inquiry to [sds@xixisys.com](mailto:sds@xixisys.com)**

*Disclaimer: 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. We as supplier shall not be held liable for any damage resulting from handling or from contact with the above product.*