



# NEWAY SINOPHC TECH. LIMITED

ADD:RM. 204, BUILDING 3, NO. 188, AONA RD., CHINA (SHANGHAI) PILOT FREE TRADE ZONE.  
Email:marketing01@newayphc.com; Phone:+86-021-50350029 <https://www.newayphc.com>

## Safety Data Sheet (MSDS)

(According to GB/T 16483 and GB/T 17519; Adapts to GHS, IMDG, IATA Standards)

### Iron(III) Chloride Hexahydrate ( $\text{FeCl}_3 \cdot 6\text{H}_2\text{O}$ )

#### SECTION 1: Identification

##### 1.1 Product Identifiers

- Product Name: Iron(III) Chloride Hexahydrate
- Product Number: FeCl3-CAS7705080-202702
- Brand: SIGALD
- CAS-No.: 7705-08-0
- Synonyms: Ferric Chloride; Iron Trichloride;  $\text{FeCl}_3 \cdot 6\text{H}_2\text{O}$
- Chemical Family: Inorganic Ferric Salt

##### 1.2 Details of the supplier of the safety data sheet

- Company : NEWAY SINOPHC TECH. LIMITED
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- Telephone : +86-021-50350029
- Fax : +86-021-50350029

##### 1.3 Emergency telephone

Emergency Phone # : +86-021-50350029  
(CHEMTREC)

##### 1.4 Uses & Restrictions

- Identified Uses: Water treatment (flocculant, coagulant); industrial etching (printed circuit boards); sludge dewatering; chemical intermediate.
- Uses Advised Against: Pharmaceutical, food, or direct oral consumption.

#### SECTION 2: Hazards Identification

2.1 GHS Classification: Skin corrosion/irritation (Category 1B); Eye damage (Category 1); Corrosive to metals (Category 1)2.2 GHS Label Elements

- Hazard Pictogram: (Corrosion)
- Signal Word: DANGER
- Hazard Statements: H314 (Causes severe skin burns and eye damage); H290 (May corrode metals)
- Precautionary Statements: P260, P280, P301+P330+P331, P304+P340, P305+P351+P338

2.3 Physical/Chemical Hazards: Corrosive to metals (aluminum, zinc); dissolves in water with heat release; reacts violently with strong bases.2.4 Health Hazards: Severe skin/eye burns; inhalation of dust irritates respiratory tract; ingestion causes gastrointestinal burns.2.5 Environmental Hazards: Low toxicity to aquatic organisms; avoid direct discharge without neutralization.

#### SECTION 3: Composition/Information on Ingredients



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- Substance/Mixture: Pure Substance | Component | Content (w/w) | CAS-No. | Hazard Classification | |-----|-----|-----|-----| | Iron(III) Chloride Hexahydrate |  $\geq 98.0\%$  | 7705-08-0 | Skin Corros. 1B; Eye Dam. 1; Metal Corros. 1 |

## SECTION 4: First Aid Measures

- Inhaled: Move to fresh air; administer oxygen if breathing is difficult; seek medical attention.
- Skin Contact: Remove contaminated clothing; rinse skin with plenty of running water for  $\geq 15$  minutes; consult a doctor.
- Eye Contact: Hold eyelids open; rinse with water/normal saline for  $\geq 15$  minutes; seek emergency medical help.
- Swallowed: Do not induce vomiting; rinse mouth with water; bring this MSDS to the doctor.

## SECTION 5: Firefighting Measures

- Suitable Extinguishing Media: Water spray, foam, CO<sub>2</sub>, dry powder.
- Unsuitable Media: Direct high-pressure water jet (may spread corrosive solution).
- Special Hazards: Non-combustible; decomposes above 300°C releasing hydrogen chloride (HCl) and iron oxides.
- Firefighter Advice: Wear SCBA and corrosion-resistant protective clothing; cool containers with water spray.

## SECTION 6: Accidental Release Measures

- Personal Precautions: Wear full PPE (chemical goggles, face shield, nitrile gloves, acid-resistant clothing).
- Environmental Precautions: Prevent runoff into sewers/rivers; contain with sandbags.
- Cleanup: Small spill - sweep into sealed containers, neutralize with lime before disposal; large spill - dike and transfer to corrosion-resistant tanks.

## SECTION 7: Handling and Storage

- Handling: Operate in well-ventilated area; avoid dust inhalation; use local exhaust ventilation; avoid contact with skin/eyes; do not mix with strong bases.
- Storage: Cool, dry, well-ventilated warehouse ( $\leq 30^{\circ}\text{C}$ ); keep container tightly closed; store separately from strong bases, oxidizing agents, and metals.
- Shelf Life: 24 months (unopened, specified conditions).

## SECTION 8: Exposure Controls/Personal Protection

- Engineering Controls: Install local exhaust ventilation; use acid-resistant equipment.
- Personal Protective Equipment (PPE):
  - Eye/Face Protection: Chemical safety goggles and face shield (EN 166/NIOSH compliant).
  - Skin Protection: Nitrile rubber gloves (0.15mm+ thickness) and acid-resistant clothing.
  - Respiratory Protection: Dust mask (FFP1) for powder handling; acid gas cartridge respirator if mist is generated.
- Hygiene Measures: Wash hands thoroughly after work; do not eat/drink/smoke in the workplace.



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## SECTION 9: Physical and Chemical Properties

- Physical State: Solid (crystalline); Color: Dark brown; Odor: Slight pungent (HCl) odor
- pH (1% Solution): 1.0-2.5; Melting Point: 37°C (loses crystallization water); Solubility: 91.2 g/100 mL (20°C, water)
- Density (25°C): 1.82 g/cm<sup>3</sup>; Particle Size: 80-200 mesh; Decomposition Temperature: >300°C
- Vapor Pressure (25°C): <0.1 hPa; Partition Coefficient (n-octanol/water): No data available

## SECTION 10: Stability and Reactivity

- Stability: Stable under normal storage/handling; hydrolyzes in water to form HCl.
- Incompatibilities: Strong bases (NaOH, KOH), active metals (Al, Zn), oxidizing agents.
- Hazardous Decomposition Products: HCl, Fe<sub>2</sub>O<sub>3</sub> (above 300°C).

## SECTION 11: Toxicological Information

- Acute Toxicity: Oral (Rat, LD<sub>50</sub>): 335 mg/kg; Dermal (Rabbit, LD<sub>50</sub>): >2000 mg/kg
- Skin/Eye Irritation: Severe skin burns and eye damage (GHS 1B/1).
- Respiratory Irritation: Dust/mist irritates nasal and throat mucosa.

## SECTION 12: Ecological Information

- Fish (Zebrafish, LC<sub>50</sub>): >100 mg/L (96-hour exposure)
- Daphnia (EC<sub>50</sub>): >50 mg/L (48-hour exposure)
- Biodegradability: Non-biodegradable but dissociates into non-persistent ions.

## SECTION 13: Disposal Considerations

- Product Waste: Neutralize with lime/sodium carbonate to pH 6-9; dispose via licensed hazardous waste facilities.
- Packaging Waste: Rinse thoroughly with water; dispose as hazardous waste or recycle.

## SECTION 14: Transport Information

- UN Number: ADR/RID: UN 3260; IMDG: UN 3260; IATA-DGR: UN 3260
- UN Proper Shipping Name: Corrosive liquid, acidic, inorganic, n.o.s. (aqueous solution) / Solid, corrosive, acidic, inorganic, n.o.s. (crystal)
- Transport Class: 8; Packaging Group: III; Environmental Hazards: No
- Special Precautions: Transport in acid-resistant containers; avoid collision, leakage, and sunlight.

## SECTION 15: Regulatory Information

- National Regulations (China): Complies with Hazardous Chemical Safety Management Regulation; meets industrial standards.
- International Regulations: GHS Rev.9 (Corrosion 1B); REACH (EU, not in SVHC List); TSCA (US, listed).

## SECTION 16: Other Information

- Revision Date: 20 JAN 2026
- Disclaimer: Based on current scientific knowledge; supplier not liable for improper use.