

MATERIAL SAFETY DATA SHEET

Chemical Product

Product Name: FERROUS CHLORIDE (Hydrate)

CAS#: 13478-10-9

Synonym: Not Available.

Chemical Name: Ferrous Chloride (Hydrate)

Chemical Formula: $\text{FeCl}_2 \cdot x\text{H}_2\text{O}$

Composition and Information on Ingredients

Name	S.K.U	% by Weight
FERROUS CHLORIDE (Hydrate)	GCS-2184	100

Hazards Identification

Potential Acute Health Effects:

Hazardous in case of skin contact (corrosive, irritant), of eye contact (irritant), of ingestion, of inhalation. The amount of tissue damage depends on length of contact. Eye contact can result in corneal damage or blindness. Skin contact can produce inflammation and blistering. Inhalation of dust will produce irritation to gastro- intestinal or respiratory tract, characterized by burning, sneezing and coughing. Severe over-exposure can produce lung damage, choking, unconsciousness or death.

Potential Chronic Health Effects:

Hazardous in case of skin contact (corrosive, irritant), of eye contact (irritant), of ingestion, of inhalation. CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC

EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to lungs, mucous membranes. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage.

First Aid Measures

Eye Contact:

Check for and remove any contact lenses. Do not use an eye ointment. Seek medical attention.

Skin Contact:

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention.

Wash contaminated clothing before reusing.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation:

Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation: Not Available.

Ingestion:

Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion:

Fire and Explosion Data

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not applicable.

Flash Points: Not applicable. Flammable Limits: Not applicable. Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not applicable.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions: Not applicable.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Accidental Release Measures

Small Spill:

Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:

Corrosive solid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Handling and Storage

Precautions:

Keep container dry. Do not ingest. Do not breathe dust. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment if ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.

Storage:

Corrosive materials should be stored in a separate safety storage cabinet or room.

Exposure Controls/Personal Protection

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:

Splash goggles. Synthetic apron. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor and dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

TWA: 1 CEIL: 2 (mg/m³) Consult local authorities for acceptable exposure limits.

Physical and Chemical Properties

Physical state and appearance : Solid. (Deliquescent crystals solid.)

Odor : Not available.

Taste : Not available.

Molecular Weight : 198.81 g/mole

Color : Green. to Blue. Green.

pH (1% soln/water) : Not available.

Boiling Point : 1023°C (1873.4°F)

Melting Point : Decomposes. (120°C or 248°F)

Critical Temperature : Not available.

Specific Gravity : 1.93 (Water = 1)

Vapor Pressure : Not applicable.

Vapor Density : Not available.

Volatility : Not available.

Odor Threshold : Not available.

Water/Oil Dist. Coeff. : Not available.

Ionicity (in Water) : Not available.

Dispersion Properties : See solubility in water, methanol.

Solubility : Easily soluble in cold water. Soluble in methanol.

Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Excess heat, incompatible materials.

Incompatibility with various substances: Reactive with oxidizing agents, acids, alkalis.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Toxicological Information

Routes of Entry: Eye contact. Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 984 mg/kg [Rat].

Chronic Effects on Humans: The substance is toxic to lungs, mucous membranes.

Other Toxic Effects on Humans:

Hazardous in case of skin contact (corrosive, irritant), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

Toxicological Data on Ingredients: Ferrous chloride: ORAL (LD50): Acute: 984 mg/kg [Rat].

Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation:

The product itself and its products of degradation are not toxic.

Special Remarks on the Products of Biodegradation: Not available.

Disposal Considerations

Waste Disposal:

Transformation Information

Land transport (ADR-RID)

Proper shipping name: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.

UN N°: 3260

H.I. nr: 80

ADR - Class: 8

Labelling - Transport: 8 : Corrosive substance.

ADR - Group: III

Sea transport (IMDG) [English only]

Proper shipping name: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.

UN N°: 3260

IMO-IMDG - Class or division: 8 : Corrosive substance.

IMO-IMDG - Packing group: III

Air transport (ICAO-IATA) [English only]

Proper shipping name: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.

UN N°: 3260

IATA - Class or division: 8 : Corrosive substance.

IATA - Packing group: III

Other Regulatory Information

Federal and State Regulations: No products were found.

Other Regulations:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada): CLASS E: Corrosive solid.

DSCL (EEC): R22- Harmful if swallowed. R36/38- Irritating to eyes and skin.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.



Additional Information

References: Not available.

Other Special Considerations: Not available.

Disclaimer:

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