



SAFETY DATA SHEET

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SECTION 1 PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: **Iron (II) chloride tetrahydrate**
 PRODUCT NUMBER: 2059
 CAS NUMBER: 13478-10-9
 SYNONYMS: Ferrous chloride tetrahydrate, Iron dichloride tetrahydrate
 MANUFACTURER:

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SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION OF SUBSTANCE OR MIXTURE

Pictogram



Signal Word

Danger

Hazard Statements

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.

Precautionary Phrases

P260	Do not breathe dust or mist.
P270	Do not eat, drink, or smoke when using this product.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P363	Wash contaminated clothing before reuse.

HMIS CLASSIFICATION:

Health: 3 Fire: 0 Reactivity Hazard: 0

NFPA RATING:

Health: 3 Flammability: 0 Reactivity Hazard: 0

SECTION 2 HAZARDS IDENTIFICATION (Cont.)

EYE CONTACT: Corrosive. Contact with the eyes causes severe irritation, burns, redness, and pain.

SKIN CONTACT: Corrosive. Causes severe irritation, redness, pain, and skin burns.

INHALATION: Corrosive irritant. Causes coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.

INGESTION: Causes severe burns of the mouth, throat, and stomach.

CHRONIC HEALTH EFFECTS: Prolonged ingestion may lead to damage to the liver and pancreas.

ACUTE HEALTH EFFECTS: Pink urine discoloration is an indicator of iron poisoning. Liver damage, coma, and death may follow, sometimes delayed as long as three days. Antidotes may be administered by medical personnel.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Formula: $\text{FeCl}_2 \cdot 4\text{H}_2\text{O}$

Molecular Weight: 198.81

CHEMICAL NAME	CAS#	%
Ferrous (II) chloride tetrahydrate	13478-10-9	100

SECTION 4 FIRST AID MEASURES

EYE EXPOSURE: Immediately flush the eyes with copious amounts of water for at least 15 minutes. Assure flushing under eyelids. A victim may need assistance in keeping their eyelids open. Get immediate competent medical attention.

SKIN EXPOSURE: Wash affected area with plenty of water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.

INHALATION: Remove to fresh air and keep at rest. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing, coughing, wheezing, or pain. In such cases, seek immediate medical assistance.

INGESTION: Seek medical assistance immediately. Keep the victim calm. Give the victim water (only if conscious). Induce vomiting only if directed by medical personnel.

SECTION 5 FIREFIGHTING MEASURES

FLASH POINT: Not available

AUTO IGNITION TEMPERATURE: Not available

EXPLOSION LIMITS: Not available

EXTINGUISHING MEDIUM: Use carbon dioxide, extinguishing powder, or foam. Water may be ineffective but may be used for cooling exposed containers.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.

HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS: Hydrogen chloride gas and iron oxides

SECTION 6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Wear all appropriate equipment when using this material. Ensure adequate ventilation. Avoid the formation of dust. Avoid breathing vapors, mist, gas, or dust.

ENVIRONMENTAL PRECAUTIONS: Prevent spillage from entering drains or allowing to be released into the environment.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Use neutralizing agent. Sweep up and place in suitable container for proper disposal.

SECTION 7 HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Wear appropriate personal protective equipment. Avoid contact with skin and eyes. Use with adequate ventilation. Avoid formation of dusts and aerosols. Handle under dry protective gas.

CONDITIONS FOR SAFE STORAGE: Store in cool, dry, and well-ventilated area. Hygroscopic. Air sensitive. Store under inert gas. Store away from air, water, moisture, strong bases, and oxidizing agents.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

EXPOSURE CONTROLS:

Component	Exposure Limits	Basis	Entity
Ferrous (II) chloride tetrahydrate	1 mg/m ³	TLV	ACGIH
	1 mg/m ³	PEL	OSHA
	1 mg/m ³	REL	NIOSH

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

EYE PROTECTION: Wear chemical safety glasses or goggles and face shield.

SKIN PROTECTION: Wear nitrile or rubber gloves, and a complete suit protecting against chemicals.

VENTILATION: Provide local exhaust, preferably mechanical.

RESPIRATOR: Use an approved respirator.

ADDITIONAL PROTECTION: Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

COLOR AND FORM: Light green solid

ODOR: None

MOLECULAR WEIGHT: 198.81

BOILING POINT: No data available

MELTING POINT: 105-110° C

SPECIFIC GRAVITY: 1.93 gm/ml

VAPOR DENSITY: No data available

SOLUBILITY: Soluble

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Stable

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS TO AVOID: Exposure to moisture

INCOMPATIBILITY: A mixture of this product and sodium or potassium will explode on impact. Strong bases, strong acids, ethylene oxide, strong oxidizing agents.

DECOMPOSITION PRODUCTS: Hydrogen chloride gas and iron oxides

SECTION 11 TOXICOLOGICAL DATA

ACUTE TOXICITY: LD50 Intraperitoneal – mouse – 92.5mg/kg

CARCINOGENIC EFFECTS: No components of this product present at levels greater than or equal to 0.1% is identified a carcinogen.

MUTAGENIC EFFECTS: Not available

TETRAOGENIC EFFECTS: Not available

CHRONIC TOXICITY: Not available

RTECS: NO5600000

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 epigastric 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. Symptoms may be delayed. Effects due to ingestion may include: Epigastric pain, diarrhea, vomiting, nausea, hematemesis.

To the best of our knowledge the toxicological effects of this compound have not been fully investigated.

SECTION 12 ECOLOGICAL DATA

No data available.

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of in according to local, state, and federal regulations.

SECTION 14 TRANSPORTATION DATA

UN1759

Corrosive solid, n.o.s.

(Iron (II) chloride tetrahydrate)

CLASS 8

PG III

Marine Pollutant: No

SECTION 15 REGULATORY INFORMATION

TSCA: Listed in the TSCA inventory

SARA 302/304: Not Listed

SARA 311/312: Acute Health Hazard

SARA (TITLE 313): Not Listed

CALIFORNIA PROP. 65: Not Listed

WHMIS CANADA: Not Listed

MASSACHUSETTS RIGHT TO KNOW COMPONENTS: Iron (II) chloride tetrahydrate

NEW JERSEY RIGHT TO KNOW COMPONENTS: Iron (II) chloride tetrahydrate

PENNSYLVANIA RIGHT TO KNOW COMPONENTS: Iron (II) chloride tetrahydrate

SECTION 16 OTHER INFORMATION

DISCLAIMER: The information herein is believed to be accurate and reliable as of the date compiled. However, Prochem, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information in this document or any use of the product based on the information.

DATE PREPARED: 01/15

SDS DEPT.