



# American International Chemical, Inc.

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## MATERIAL SAFETY DATA SHEET

### FERROUS CHLORIDE TETRAHYDRATE REAGENT

#### SECTION 1 - CHEMICAL PRODUCT AND COMPANY INFORMATION

American International Chemical, Inc. 135 Newbury Street Framingham, MA 01701	Emergency Number: Chemtrec Information Number:	800-424-9300 703-527-3887 800-238-0001
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Date: August 2007

Synonyms: Iron (II) Chloride Tetrahydrate

CAS #: 13478-10-9

DOT Hazard Class: Ferrous Chloride, Solid  
Hazard Class 8, NA1759, PGII

#### SECTION 2 - COMPOSITION AND INFORMATION ON INGREDIENTS

Component	CAS #	%
Ferrous Chloride Tetrahydrate	13478-10-9	99% min

#### SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Pale green crystals that are very corrosive. Will cause severe irritation or burns to every area of contact. Harmful if swallowed or inhaled.

##### POTENTIAL HEALTH EFFECTS:

**Skin:** May cause severe irritation, redness, pain, and skin burns.

**Eyes:** Contact causes severe irritation, burns, redness, and pain.

**Inhalation:** Extremely destructive to tissues of the mucous membranes and upper respiratory tract.

**Ingestion:** Swallowing can cause severe burns of the mouth, throat, and stomach. Can cause sore throat, vomiting, and diarrhea. Low systemic toxicity in small quantities but larger doses may cause systemic effects. Pink urine discoloration is a strong indicator of iron poisoning. Liver damage, coma and death may follow, sometimes delayed as long as three days.

CARCINOGENICITY: Not Identifiable

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#### **SECTION 4 - FIRST AID MEASURES**

**Skin:** Immediately wash skin with soap and water for at least 15 minutes.

**Eyes:** Immediately flush with plenty of water for at least 15 minutes, holding eyelids apart.

**Inhalation:** Remove to the fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

**Ingestion:** If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person.

**On All Of The Above:** Seek medical attention immediately.

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#### **SECTION 5 - FIRE FIGHTING MEASURES**

Flash Point: Non Combustible

Flammable Limits: Non Combustible

Extinguishing Media: Use media that is appropriate to treat surrounding fire.

Special Fire Fighting Procedures: Use fire-fighting procedure that is appropriate to treat surrounding fire. All firefighters should use self-contained breathing apparatus and full fire-fighting turnout gear.

Unusual Fire Explosion Hazard: During a fire, irritating and highly toxic gasses may be generated by thermal decomposition or combustion.

Auto Ignition Temperature: Not Applicable.

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#### **SECTION 6 - ACCIDENTAL RELEASE MEASURES**

Isolate hazard area and deny entry to unnecessary or unprotected personnel. Contain spill, sweep up, collect and place in a disposal container. Avoid runoff into storm sewers and ditches that lead to waterways.

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#### **SECTION 7 - HANDLING AND STORAGE**

Avoid contact with skin, eyes and clothing. Use with adequate ventilation. Avoid breathing dust. Use normal personal hygiene and housekeeping. Store in cool dry area away from other incompatible materials. Product is slightly hygroscopic and should be stored in a dry area to prevent moisture pick up and caking.

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#### **SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION**

RESPIRATORY PROTECTION: Use NIOSH/MSHA approved respirators.

VENTILATION REQUIREMENTS: Ventilate as necessary to eliminate dust from the work area and maintain concentrations below the limit.

SKIN AND EYE PROTECTION: Use rubber or neoprene gloves, chemical goggles and clothing sufficient to protect skin and eyes from dust.

WORK, HYGIENIC PRACTICES: As required to protect skin and eyes from dust, safety showers and/or eye wash should be available. Do not leave food or smoke in work area. Wash thoroughly and remove or clean any contaminated clothing.

EXPOSURE LIMITS: ACGIH Threshold Limit Value (TLV): 1 mg/m<sup>3</sup> (TWA) soluble iron salt as Fe.

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## **SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

Boiling Point: 1023 °C (Anhydrous)

Vapor Pressure (MM Hg): 10 @ 700 °C

Vapor Density (AIR=1): Not Available

Specific Gravity/Density (H<sub>2</sub>O=1): 1.93 g/cc

Percent Volatile by Volume @ 21 °C (%): 0

Melting Point: 670 – 674 °C

Evaporation Rate (Butyl Acetate=1): Not Applicable

Solubility in Water: Soluble in water.

pH: Not Available

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## **SECTION 10 - STABILITY AND REACTIVITY**

CHEMICAL STABILITY: Stable under normal temperatures and pressures.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

HAZARDOUS DECOMPOSITION PRODUCTS: May produce hydrogen chloride, irritating and toxic fumes and gases, oxides of iron.

KEEP AWAY FROM: Moisture, strong acids, strong bases, strong oxidizing agents, ethylene oxide, potassium, and sodium.

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## **SECTION 11 - TOXICOLOGICAL INFORMATION**

Anhydrous: Oral rat LD<sub>50</sub>: 450 mg/kg. Investigated as a mutagen.

Hydrate: No LD<sub>50</sub>/LC<sub>50</sub> information found relating to normal routes of occupational exposure.

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## **SECTION 12 - ECOLOGICAL INFORMATION**

Not Available

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## **SECTION 13 - DISPOSAL CONSIDERATIONS**

Dispose of in accordance with all federal, state and local regulations.

RCRA WASTE #: Not Listed

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**SECTION 14 - TRANSPORTATION INFORMATION**

D.O.T. SHIPPING NAME: Ferrous Chloride, Solid  
TECHNICAL SHIPPING NAME: Same as above  
U.N./NUMBER: NA1759  
D.O.T. HAZARD CLASS AND GROUP NUMBER: Hazard Class 8, Packing Group II  
D.O.T. PLACARD: Corrosive  
PRODUCT LABEL: Same as above

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**SECTION 15 - REGULATORY INFORMATION**

OSHA STATUS: Not listed

TSCA STATUS: CAS# 13478-10-9 is not on the TSCA Inventory because it is a hydrate. It is considered listed because the CAS number of the anhydrous form (7758-94-3) is on the inventory.

CERCLA REPORTABLE REQUIREMENTS (RQ): None

SARA TITLE III INFORMATION:

Section 302 Extremely Hazardous Substance: Not listed

Section 313 Toxic Chemicals: Not listed

Section 311/312 Hazard Categories:

Acute Health Hazard: Immediate

Chronic Health Hazard: Delayed

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**SECTION 16 - OTHER INFORMATION**

NFPA Ratings: Health: 2 Flammability: 0 Reactivity: 0

Reason for Issue: Changed Date

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