**** MATERIAL SAFETY DATA SHEET ****

Iron(II) chloride tetrahydrate, 99+%  
08550

**** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ****

MSDS Name: Iron(II) chloride tetrahydrate, 99+%  
Catalog Numbers: AC205080500, AC205080500, 571937, 571937-1, 190500, 190500, 190500, 571937
Synonyms: Ferric chloride tetrahydrate
Company Identification: Fisher Scientific  
1 Reagent Lane  
Fairlawn, NJ 07410
For information, call: 201-786-7100
Emergency Number: 201-786-7100
For CHEMTREC assistance, call: 800-424-9300
For International CHEMTREC assistance, call: 705-527-3887

**** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS ****

Hazard Symbols: XN  
Risk Phrases: 23 36/37/38

**** SECTION 3 - HAZARDS IDENTIFICATION ****

EXTERMINAL OVERVIEW
Appearance: Not available.
Caution! Hygroscopic. Causes severe respiratory tract irritation.  
May cause severe eye and skin irritation with possible burns. Causes severe digestive tract irritation with pain, nausea, vomiting and diarrhea. May corrode the digestive tract with hemorrhaging and possible shock.
Target Organs: None.

Potential Health Effects
Eye:  
Contact with eyes or dust may cause severe irritation, and possible eye burns.
Skin:  
Contact with skin causes irritation and possible burns, especially if the skin is wet or moist.
Ingestion:  
May cause severe gastrointestinal tract irritation with nausea, vomiting and possible burns.
Iron compounds cause hemorrhage and necrosis of the stomach with shock, severe diarrhea and possible brain damage. Delayed symptoms such as acidosis, shock, rapid breathing, liver injury and possible death may occur.
Inhalation:  
Causes respiratory tract irritation.
Chronic:  
No information found.

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

Eyes:  
Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid immediately.
Skin:  
Get medical aid immediately. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes.
Ingestion:  
DO NOT induce vomiting. If victim is conscious and alert, give 2-4 cups of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.
Inhalation:  
Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Notes to Physician:  
Treat symptomatically and supportively.
Antidote:  
None reported.

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

General Information:  
Wear appropriate protective clothing to prevent contact with skin and eyes. Wear a self-contained breathing apparatus (SCBA) to prevent contact with thermal decomposition products. Substance is noncombustible.
Extinguishing Media:  
Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.
Autoignition Temperature: Not available.
Flash Point: Not available.
NFPA Rating: Not published.
Explosion Limits: Lower: Not available. Upper: Not available.

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

General Information: Use proper personal protective equipment as indicated.
Spills/Leaks:  
Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions.

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

Handling:  
Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Do not get on skin or in eyes. Do not ingest or inhale. Wash clothing before reuse.
Storage:  
Store in a cool, dry, well-ventilated area away from incompatible substances.

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

Engineering Controls:  
Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product.

Exposure Limits

Chemical Name: AC205080500
NIOSH: OSHA - Final PELs
Iron(II) chloride tetrahydrate as Fe: 1 mg/m3 1 mg/m3 TWA (listed under IRON SALTS SOLUBLE).

OSHA Vacated PELs: Iron(II) chloride tetrahydrate as Fe: 1 mg/m3 TWA (listed under IRON SALTS SOLUBLE).

Personal Protective Equipment
Eyes:  
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin:  
Wear impervious gloves.
Clothing:  
Wear appropriate protective clothing to minimize contact with skin.
Respirators:  
Follow the OSHA respiratory regulations found in 29 CFR 1810.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

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

Physical State: Solid
Appearance: Not available
Color: None reported
pH: Not available
Vapor Pressure: Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Boiling Point: Not available
Freezing/Melting Point: Not available
Decomposition Temperature: 150 deg C
Solubility: soluble in alcohol
Specific Gravity/Density: 1.9306 g/cm3
Molecular Formula: C2Fe3H2O
Molecular Weight: 198.61

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

Chemical Stability: Stable.
Conditions to Avoid:
- Incompatible materials:
- Incomptabilities with Other Materials:
- Incompatible with ethylene oxide, potassium, and sodium.

Hazardous Decomposition Products:
- Hydrogen chloride.

Hazardous Polymerization: Has not been reported.

### SECTION 11 - TOXICOLOGICAL INFORMATION ###

**RECEI:**
- CAS#: 13478-10-9: N05000000
- LD50/LC50: Not available.
- Carcinogenicity:
  - Iron (II) chloride tetrahydrate: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

**Epidemiology:**
- No data available.

**Teratogenicity:**
- No data available.

**Reproductive Effects:**
- No data available.

**Neurotoxicity:**
- No data available.

**Mutagenicity:**
- No data available.

**Other Studies:**
- No data available.

### SECTION 12 - ECOLOGICAL INFORMATION ###

**Ecotoxicity:**
- Not available.

**Environmental Fate:**
- Not available.

**Physical/Chemical:**
- Not available.

**Other:**
- Not available.

### SECTION 13 - DISPOSAL CONSIDERATIONS ###

Dispose of in a manner consistent with federal, state, and local regulations.

RCRA D-Series Maximum Concentration of Contaminants: None listed.

RCRA U-Series Chronic Toxicity Reference Levels: None listed.

RCRA F-Series: None listed.

RCRA U-Series: None listed.

### SECTION 14 - TRANSPORT INFORMATION ###

**US DOT:**
- Shipping Name: FERROUS CHLORIDE, SO.JD
- Hazard Class: 8
- UN Number: NA1759

**IATA:**
- Not regulated as a hazardous material.

**RID/ADR:**
- Not regulated as a hazardous material.

**Canadian TDG:**
- No information available.

### SECTION 15 - REGULATORY INFORMATION ###

**US FEDERAL:**
- TSCA: CAS#: 13478-10-9 is not on the TSCA inventory. It is a hydrate and exempt from TSCA inventory requirements (40CFR725.31(c)(3)).
- Health & Safety Reporting List:
  - None of the chemicals are on the Health & Safety Reporting List.

**Chemical Test Rules:**
- None of the chemicals in this product are under a Chemical Test Rule.

**Section 12b:**
- None of the chemicals are listed under TSCA Section 12b.

**TSCA Significant New Use Rule:**
- None of the chemicals in this material have a SNUR under TSCA.

**SARAH Section 302 (RQ):**
- None of the chemicals in this material have an RQ.

**Section 302 (TPQ):**
- None of the chemicals in this product have a TPQ.

**SARA Codes:**
- CAS # 13478-10-9: acute.