



# American International Chemical, Inc.

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## MATERIAL SAFETY DATA SHEET

### FERROUS SULFATE HEPTAHYDRATE

#### 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) Sulfate Heptahydrate; Copperas; Green Vitriol

CAS #: 7782-63-0

DOT Hazard Class: Not Regulated

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

Ferrous Sulfate Heptahydrate 99.5% min.

#### SECTION 3 - HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:** Hydrosopic blue green, odorless crystals. May cause irritation to the skin, eyes and respiratory tract. Can be harmful if ingested.

**POTENTIAL HEALTH EFFECTS:**

**Skin:** May cause skin irritation

**Eyes:** May cause irritation or burning.

**Inhalation:** May cause irritation to the respiratory tract.

**Ingestion:** Side effects of ingestion of iron salts may include heartburn, nausea, gastric discomfort, constipation or diarrhea. Symptoms of severe poisoning may occur within 30 minutes or be delayed for several hours. Severe hemorrhagic gastritis with abdominal pain, retching, violent diarrhea and vomiting may occur. Circulatory system may be affected with symptoms of shock, rapid, weak or no pulse, severe hypotension and pulmonary changes with dyspnea, and emphysema may occur. The average lethal dose of iron is about 200 to 250 mg per kg of body weight.

**CHRONIC EFFECTS:** May cause damage to the liver, kidneys and blood vessels.

**Target Organs:** Eyes, skin, liver, kidneys, respiratory and central nervous system.

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 eye lids apart.

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

**Ingestion:** In patients not in shock or coma, induce emesis with syrup of ipecac if vomiting has not occurred. Follow with gastric lavage using deferoxamine, 2 grams in 1 liter of water which contains sodium bicarbonate 20 gm/L. Leave 10 grams of deferoxamine in 50 ml of 5% sodium bicarbonate in the stomach. Maintain airway, blood pressure and respiration. Treat symptomatically and supportively. (Driesbach, Handbook of Poisoning, 11th edition.) Get medical attention. Treatment should be administered by qualified medical personnel.

**On All Of The Above:** Consult a physician if symptoms persist.

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

Flash Point: Non Combustible (Dry Product)

Flammable Limits: Non Combustible (Dry Product)

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. Move container from fire area, if possible.

Unusual Fire Explosion Hazard: Not identified

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 which 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 (below 24°C - 75°F) 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.

SKIN AND EYE PROTECTION:

Use rubber or neoprene gloves, chemical goggles and clothing sufficient to protect skin 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: PEL and TLV 1 mg/m<sup>3</sup> for Iron Salts soluble, as Fe

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

Boiling Point: 300°C (572°F) Decomposes

Vapor Pressure (MM Hg): Not Applicable

Vapor Density (AIR=1): Not Applicable

Specific Gravity (H2O=1): 1.9

Bulk Density: Not Available

Percent Volatile by Volume (%): Zero

Melting Point: 64°C (147°F)

Evaporation Rate (Butyl Acetate=1): Not Applicable

Solubility in Water: Appreciable, 48g/100g @ 20°C

pH: 3 - 5 in a 5% aqueous solution.

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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: Oxides of sulfur

KEEP AWAY FROM: Air and moisture (forms ferric sulfate); oxidizers, alkalis, silver and gold salts

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## **SECTION 11 - TOXICOLOGICAL INFORMATION**

LD<sub>50</sub> Mouse - Intravenous - 51 mg/kg LD<sub>50</sub> Mouse Oral - 1520 mg/kg

Ferrous Sulfate Heptahydrate

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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:...Chemicals N.O.S. Not Regulated

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**SECTION 15 - REGULATORY INFORMATION**

OSHA STATUS: Not Listed

TSCA STATUS: Listed

CERCLA REPORTABLE REQUIREMENTS: 1,000 lbs

SARA TITLE III INFORMATION:

Section 302 Extremely Hazardous Substance: Unlisted

Section 313 Toxic Chemicals: Unlisted

Section 311/312 Hazard Category: Immediate (acute) Health Hazard, Delayed (chronic).

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**SECTION 16 - OTHER INFORMATION**

Reason for Issue: Changed Date

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