# MATERIAL SAFETY DATA SHEET

## Ferrous Sulfate

### HEPTAHYDRATE - MONOHYDRATE

## Manufacturer Information

**Product/Material:** Ferrous Sulfate Moist & Dried Heptahydrate & Monohydrate  
**Manufacturer’s Name & Address:** QC Corporation, 5566 Nash Road, Cape Girardeau, MO 63701  
**Emergency Tel. No.:** 410-486-0010  
**Chemtrec Number:** 800-737-0010  
**Date Prepared:** September 1, 2006  
**Prepared By:** Jason Gordon

## Section I - Product Identification

**Trade Name:** Ferrous Sulfate, Moist Heptahydrate, Dried Heptahydrate, Monohydrate  
**Synonym:** Copperas, Iron (II) Sulfate  
**Chemical Family:** Iron (II) Sulfate  
**Formula:** FeSO₄ · 7H₂O - Heptahydrate  
**CAS:** 7720-78-7  
**HMIS:** H1 FO RO, Personal Protection Code-E (Safety glasses, gloves)  
**DOT Category (only for packages containing 1,000 lbs. or more):**  
* Per 49CFR 172.504 (f) (9), Class 9 placards are not required for domestic (USA ground) transportation, however shipments with packaging or bulk in excess of 1,000 lbs. each, will require a marking on a white square of 3077. Shipment with markings DO NOT require a driver CDL with hazardous endorsements.

## Section II - Hazardous Ingredients

**Ferrous Sulfate:** FeSO₄, H₂O  
**OSHA PEL:** N.A.  
**ACGIH TLV (1979):** Rat, Oral LD50: 1480 mg/m³  
**Other Limits:** None

## Section III - Physical Data

**Boiling Point:** Decomposition at 300°C.  
**Vapor Pressure (mm Hg):** 0  
**Vapor Density:** N.A.  
**Solubility in Water (20°C):** Heptahydrate: 48.50 gms in 100 ml  
**Appearance & Odor:** Heptahydrate: Blue-green, acidic/sour  
**Specific Gravity:** Heptahydrate: 1.898 @ 25°C  
**Monohydrate: 2.970 @ 25°C**

## Section IV - Fire and Explosion Hazard Data

**Flash Point:** None  
**Flammable Limits:** N.A.  
**Extinguishing Media:** N.A.  
**Special Firefighting Procedures:** N.A.  
**Unusual Fire & Explosion Hazards:** None

## Section V - Reactivity Data

**Stability:** Stable  
**Incompatibility:** Oxidizing Agents and Alkalies.  
**Conditions to Avoid:** Extremely high temperatures.  
**Hazardous Decomposition or By-products:** Products of sulfur oxides, i.e. SO₂ & SO₃  
**Hazardous Polymerization:** Will Not Occur

## Section VI - Health Hazard Data

**Route(s) of Entry:** Inhalation, Ingestion  
**Inhalation:** Irritation to respiratory system.  
**Skin:** Irritation, will cause painful irritation.  
**Eyes:** Irritation or itching, stinging of eyes, breathing problems, stomach ache, acid or sour taste.  
**Carcinogenicity:** Not established.  
**Medical Conditions Generally Aggravated by Exposure:** Dermatitis, asthma, conjunctivitis, stomach or digestive problems.  
**Signs and Symptoms of Exposure:** Irritation or itching, stinging of eyes, breathing problems, stomach ache, acid or sour taste.  
**Emergency and First-Aid Procedures:** Flood skin and eyes with water for 15 minutes, consult physician. If inhaled, remove to fresh air, consult physician. If ingested, drink large amounts of water, induce vomiting, consult physician.

## Section VII - Precautions for Safe Handling and Use

**Waste Disposal Method:** Remove to properly designated landfill or, if in solution, precipitate with alkali and filter off iron for removal to landfill with pH adjustments of the filtrate and discharge to sewer.  
**Steps to be Taken in Case Material is Released or Spilled:** Sweep up and repackaged or place in receptacle for future disposal.  
**Other Precautions:** None

## Section VIII - Control Measures

**Respiratory Protection:** Dusk mask  
**Protective Gloves:** Work gloves  
**Eye Protection:** Safety goggles  
**Clothing:** Coveralls  
**Ventilation:** Local exhaust-none required.  
**Other - None**

## Summary

QC Corporation, One Reservoir Circle, Suite 100, Baltimore, MD 21208, 800-883-0010, 410-486-0010, 410-486-0895 Fax