

# DINESH CHEMICALS

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## “Material Safety Data Sheet”

Effective Date: January-2019

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### **Section.1      Product Identification :**

**Product Name** : Ferrous Sulphate Monohydrate  
**Synonyms** : Coppreas, iron sulfate  
**Chemical Family** : Inorganic salt  
**Chemical Formula** : FeSO<sub>4</sub>.x H<sub>2</sub>O  
**Molecular Weight** : 169.96

### **Section 2      Components and Contaminants :**

**Components** : Ferrous Sulfate Monohydrate 99-100%  
**CAS No.** : 17375-41-6

### **Section 3      Hazards Identification:**

#### **Emergency Overview**

**WARNING | HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. AFFECTS THE LIVER.**

#### **SAFETY DATA**

**Health Rating : 3 –Severe (Life)**

**Flammability Rating : 0 – None**

**Reactivity Rating: 1- Slight**

**Contact Rating: 2- Moderate**

**Lab Protective Equip: GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES**

**Storage Color Code: Green (General Storage)**

#### **Potential Health Effects**

##### **Inhalation:**

Causes irritation to the respiration tract, Symptoms may include coughing, shortness of breath.

##### **Ingestion:**

Low toxicity in small quantity but larger dosages may cause nausea, vomiting, diarrhea, and black stool. Pink urine discoloration is a strong indicator of iron poisoning. Liver damage, coma, and death from iron poisoning has been recorded. Smaller doses are much more toxic to children.

##### **Skin Contact:**

Causes irritation to skin. Symptoms include redness, itching, and pain.

##### **Eye Contact:**

Causes irritation, redness, and pain.

##### **Chronic Exposure:**

Severe or chronic ferrous sulfate poisonings may damage blood vessels. Large chronic doses cause rickets in infants. Chronic exposure may cause liver effects. Prolonged exposure of the eyes may cause discoloration.

##### **Aggravation of Pre-existing Conditions:**

Persons with pre-existing skin disorders or eye problems, or impaired liver, kidney or respiratory function May be more susceptible to the effects of the substance.

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## **Section 4** **First Aid Measures**

**Inhalation:** Remove from exposure area to fresh air. If breathing has stopped. Perform artificial respiration. Consults physician.

**Skin Contact:** Remove contained clothing and shoes immediately. Wash affected area with soap and water.

**Eye Contact:** Immediately flush eyes with adequate amount of water, lifting lower and upper eyelids occasionally. Call a Doctor immediately.

**Ingestion:** If 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 20g/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. (Drechsel, Handbook of poisoning .11th edition).

## **Section 5** **Fire and Explosion Information:**

Fire and Explosion Hazard: Negligible fire hazard when exposed to heat or flame.

Fire Fighting Media : Dry chemical carbon dioxide. Water spray or foam

Move container from fire area if possible. Do not Scatter spilled material with high pressure water.

Use agents appropriate to surrounding fire.

## **Section 6** **Accidental Release Measures:**

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8.

Spills: Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust.

## **Section 7** **Handling and Storage:**

Keep in a tightly closed container, stored in dry, cool ventilated area. Follow all state & local regulations when steaming or disposing of ferrous Sulphate Monohydrate.

Condition to avoid: Dispersion of dust in air.

## **Section 8** **Exposure Controls/ Personal Protection**

**Airborne Exposure limits:** Iron Salts, Soluble, as Fe  
1mg/m<sup>3</sup> ACGIH TWA

### **Protective Equipment:**

**Respirator:** Specific respirators selected must be based on levels of the substance in the workplace. They must not exceed the working limits of the respirator and be jointly approved by the Govt. Safety Agency.

**Clothing:** Clean body covering clothing recommended.

**Gloves:** Rubber gloves or other appropriate protective gloves

**Eye protection:** Dust resistant safety goggles recommended. Eye wash station.

## **Section 9** **Physical & Chemical Datas:**

Description:	Greyish White Powder
Solubility:	Slowly Soluble in Water
Melting Point:	Decomposes at 671 C
Boiling point:	N/A
Bulk density:	30 lb/cu.ft.(loose), 45 lb/cu. Ft.(Packed)
Molecular Formula:	FeSO <sub>4</sub> .x H <sub>2</sub> O
Molecular Weight	169.96
Vapour Pressure	No Information
pH (5% solution):	2.8--5

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## **Section 10 Stability & Reactivity :**

<b>Stability</b>	:	Stable under normal conditions
<b>Incompatibilities</b>	:	AlKalis, Arsenic trioxide and sodium nitrate: Methyl Isocynoacetate
<b>Decomposition</b>	:	Thermal decomposition products may include toxic Sulfur Oxides.
<b>Polymerization</b>	:	Does not occur
<b>Conditions to avoid</b>	:	Moisture

## **Section 11 Toxicological Information**

Oral rat LD50: 319 mg/kg. Investigated as tumorigen and mutagen.

## **Section 12 Ecological Information**

Environmental Fate: No Information available  
Environmental Toxicity: No Information available

## **Section 13 Disposal Considerations :**

Collect Soil Spill and neutralize with lime or sodium carbonate if necessary. Place in suitable container and dispose as per state local regulation.

## **Section 14 Transport Information**

Not Regulated.

## **Section 15 Regulatory Information:**

Not fully available

## **Section 16 Other Information:**

**NFPA Ratings:** Health : 1 Flammability : 0 Reactivity : 0

### **Label Hazard Warning :**

WARNING | HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. AFFECTS THE LIVER.

### **Label First Aid:**

Avoid contact with eyes, skin and clothing.

Wash thoroughly after handling.

Avoid breathing dust.

Keep container closed.

Use only with adequate ventilation.

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## **Label First Aid:**

If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. In all cases, get medical attention.

Product Use:- Pharmaceutical, Food Additive, Feed Additive.

## **Disclaimer:**

The above information provided is believed to be correct, and be used as guide for the better handling of material, Individuals receiving the information must exercise their own independent judgment in determining its appropriateness for a particular purpose. Dinesh Chemicals will not be responsible for damages resulting from use of or reliance upon this material.

**This MSDS has been updated on 1<sup>st</sup> Jan-2019. This suspends all previous MSDS.**