

MATERIAL SAFETY DATA SHEET

Ferrous Sulfate (Copperas)

SECTION 1 . Product and Company Identification

Product Name and Synonym: Ferrous Sulfate (Copperas)
Product Code: F3032
Material Uses:
Manufacturer: Science Stuff
1104 Newport Ave
Austin, TX 78753
(512) 837-6020
Entry Date : 6/4/2013
Print Date: 6/4/2013
24 Hour Emergency Assistance : Chemtrec 800-424-9300
Canutec 613-996-6666

Health:	2
Flammability:	0
Reactivity:	0
Hazard Rating: Least Slight Moderate High Extreme 0 1 2 3 4 NA=Not Applicable NE=Not Established	

SECTION 2 HAZARD IDENTIFICATION

Harmful if swallowed. May cause irritation. Avoid breathing vapors, or dusts. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

Physical state: Solid. [Granular solid. Crystals.]
OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency Overveiw

WARNING
HARMFUL IF SWALLOWED
CAUSES EYE AND SKIN IRRITATION
MAY CAUSE RESPIRATORY TRACT IRRITATION
MAY CAUSE DAMAGE TO THE THE FOLLOWING ORGANS: LIVER.
MAY BE HARMFUL IF INHALED.

Do not ingest.
Avoid contact with eyes, skin or clothing.
Keep container tightly closed and sealed until ready for use. Use only with adequate ventilation. Wash thoroughly after handling.

Routes of entry:
Inhalation. Ingestion.

Potential acute health effects:

Eyes: Irritating to eyes
Skin: irritating to skin
Inhalation: May cause respiratory irritaion
Ingestion: Toxic if swallowed.
Carcinogenicity: No known significant effects or critical hazards.
Mutagenicity: No known significant effects or critical hazards.
Teratogenicity/ Reproductive toxicity: No known significant effects or critical hazards.
Developmental effects: No known significant effects or critical hazards.
Fertility effects: No known significant effects or critical hazards.
Target organs: May cause damage to the following organs:
liver
Medical conditions aggravated by over-exposure:
Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk

Ferrous Sulfate (Copperas)

may be aggravated by over-exposure to this product

SECTION 3 MIXTURE COMPONENTS

SARA 313	Component	CAS Number	Percent Comp.	Dimension	Exposure Limits
<input type="checkbox"/>	Ferrous Sulfate Heptahydrate	CAS# 7782-63-0	100 %	W/W	TXDS: orl-rat LD ₅₀ : 1480 mg/mf

SECTION 4 FIRST AID MEASURES

Harmful if swallowed. May cause irritation. Avoid breathing vapors, or dusts. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

FIRST AID: SKIN: Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention

EYES: Wash eyes with plenty of water for at least 15 minutes, lifting lids occasionally. Seek Medical Aid. INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen

INGESTION: If swallowed, induce vomiting immediately after giving two glasses of water. Never give anything by mouth to an unconscious person.

SECTION 5 FIRE FIGHTING MEASURES

Fire Extinguisher Type: Any means suitable for extinguishing surrounding fire

Fire / Explosion Hazards: None Known.

Fire Fighting Procedure: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and clothing.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Sweep up and place in suitable (fiberboard) containers for reclamation or later disposal.

Personal precautions: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personal from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up: Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

SECTION 7 HANDLING AND STORAGE

Stored materials should be placed in a dry and reasonably temperatured area, preferably below 75 Deg F.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: Dust mask

Ferrous Sulfate (Copperas)

Ventilation

- Local Exhaust
- Mechanical

Protective Gloves: Wear appropriate gloves to prevent skin exposure

Eye Protection: Safety goggles

Other Protective Equipment: Wear appropriate clothing to prevent skin exposure

Engineering measures: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits.

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking, and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protection

Eyes: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

Recommended:

safety glasses with side-shields,

Skin: Personal protective equipment for the body should be selected based on the task being performed and risks involved and should be approved by a specialist before handling this product.

Body recommended:

lab coat

Respiratory: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Recommended: nitrile rubber

Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Melting Point:	Information not available	Percent Volatile by Volume:	0
Boiling Point:	Information not available	Evaporation Rate	0
Vapor Pressure:	Information not available	Evaporation Standard	
Vapor Density:	Information not available	Auto Ignition Temp	Not applicable

Ferrous Sulfate (Copperas)

Solubility in Water:	57 gms in 100 mls of water	Lower Flamm. Limit in Air	Not applicable
Appearance /Odors:	Light grey, Acidic/sour	Upper Flamm. Limit in Air	Not applicable
Flash Point:	None		
Specific Gravity:	1.899 @ 14 Deg C		

SECTION 10 STABILITY AND REACTIVITY INFORMATION

Stability:	Stable
Conditions to Avoid:	Extremely high temperatures
Materials to Avoid:	Oxidizing agents and Alkalies
Hazardous Decomposition Products:	Products of sulfur oxides
Hazardous polymerization:	Will Not Occur
Conditions to Avoid:	None known

SECTION 11 Toxicological Information

Iron(II) Sulfate Heptahydrate

LD50	Oral	Mouse	1520 mg/kg
LDLo	Oral	Rat	1389 mg/kg
LDLo	Oral	Rabbit	2778 mg/kg
LDLo	Rectal	Rat	697 mg/kg

Carcinogenic effects: No known significant effects or critical hazards

Mutagenic effects: No known significant effects or critical hazards

Teratogenicity/Reproductive toxicity: No known significant effects or critical hazards

SECTION 12 Ecological Information

Aquatic toxicity

Product/ ingredient name

Iron (II) Sulfate Heptahydrate

Acute EC50 7.1 mg/L	Daphnia	48 hours
Acute EC50 7.1 ppm	Daphnia – Water flea -	48 hours
Fresh water	Daphnia pulex -	<24 hr
Acute LC50 51.2 mg/L	Fish	96 hours
Acute LC50 51.2 ppm	Fish – Bluegill – Lepomis	96 hours
Fresh water	macrochirus	
Acute LC50 20.8 mg/L	Fish	96 hours
Acute LC50 20.8 ppm	Fish – Rainbow trout,	96 hours
Fresh water	Donaldson trout –	
	Oncorhynchus mykiss	

Environmental effects : No known significant effects or critical hazards.

Other adverse effects : No known significant effects or critical hazards.

SECTION 13 Disposal Considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14 Transport Information

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DOT Classification: Not Regulated

DOT Regulations may change from time to time. Please consult the most recent D.O.T. regulations.

SECTION 15 Regulatory Information

United States
HCS Classification:
Toxic material
Irritating material
Target organ effects

U.S. Federal regulations:

United States inventory (TSCA 8b): listed
TSCA (Toxic Substance Control Act): This product is listed on the TSCA Inventory.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notifications: No products were found.
SARA 302/304/311/312 hazardous chemicals: Iron (II) Sulfate Heptahydrate
SARA 311/312 MSDS distribution- Chemical inventory- hazard identification: Iron (II) Sulfate Heptahydrate
Immediate (acute) health hazard, Delayed (chronic) health hazard
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: No products were found.
Clean Air Act (CAA) 112 accidental release prevention: No products were found.
Clean Air Act (CAA) 112 regulated flammable substance: No products were found.
Clean Air Act (CAA) 112 regulated toxic substance: No products were found.

DEA List I Chemicals : not listed
(Precursor Chemicals)
DEA List II Chemicals : not listed
(essential Chemicals)

Massachusetts Substance : This material is listed.
New Jersey Hazardous Substances : This material is listed.
Pennsylvania RTK Hazardous Substances : This material is listed.

Canada
WHMIS (Canada) :
Class D-2B: Material causing other toxic effects (Toxic)
Canadian lists : CEPA Toxic Substance: This material is not listed.
Canadian ARET: This material is not listed.
Canadian NPRI: This material is not listed.
Alberta Designated Substances: This material is not listed.
Ontario Designated Substances: This material is not listed.
Quebec Designated Substances: This material is not listed.

CEPA DSL/ CEPA NDSL : CEPA DSL:
This material is listed or exempted.
This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

SECTION 16 Additional Information

Ferrous Sulfate (Copperas)

Flammability

Health

Reactivity

Revisions

NFPA

0.1

The information herein is believed to be accurate and is offered in good faith for the user's consideration and investigation. No warranty either expressed or implied is made for the completeness or accuracy of the information whether originating from the above mentioned company or not. Users of this material should satisfy themselves by independent investigation of current scientific and medical knowledge that the material can be used safely.