Safety Data Sheet

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name: Ferrous Sulfate Heptahydrate (Moist or Dried)
CAS-No.: 7782-63-0

Other means of identification

Synonyms: Copperas, Iron (II) Sulfate

Recommended use of the chemical and restrictions on use

Recommended Use: Laboratory chemicals, manufacture of substances

Uses advised against: No information available

Details of the supplier of the safety data sheet

Supplier Name: QC LLC
Supplier Address: 5566 Nash Rd
Cape Girardeau, MO 63701
Supplier Phone Number: 800-666-4766 Fax: 573-335-2308
Contact Phone: 573-335-6700
Supplier Email: info@qccorporation.com

Emergency telephone number CHEMTREC (800) 424-9300

2. HAZARDS IDENTIFICATION

Classification

Acute Toxicity, Oral	Category 4
Skin irritation	Category 2
Eye Irritation	Category 2A

GHS Label elements, including precautionary statements

Pictogram:

Signal word: Warning

Hazard statement(s):
Harmful if swallowed.
Causes skin irritation.
Causes serious eye irritation.

Precautionary statement(s):
Wash skin thoroughly after handling.
Do not eat, drink, or smoke when using this product.
Wear protective gloves/eye protection/face protection.

IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
IF ON SKIN: Wash with plenty of soap and water.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Specific treatment (see supplemental first aid instructions on this label).
Rinse mouth.
If skin irritation occurs: Get medical advice/ attention.
If eye irritation persists: Get medical advice/ attention.
Remove contaminated clothing and wash before reuse.
Dispose of contents/container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC): None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Synonyms:	Ferrous Sulfate Heptahydrate
Formula:	$FeSO_4 \cdot 7H_2O$
Molecular Weight:	278.01 g/mol
CAS-No.:	7782-63-0
Weight %:	100%

Hazardous components

Component:	Classification:
Ferrous Sulfate Heptahydrate	Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2A; H302, H315, H319

4. FIRST AID MEASURES

Description of first aid measures

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact: Wash off with soap and plenty of water. Consult a physician.

In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed: The most important known symptoms and effects are described in the labelling (see Section 2.2) and/or in Section 11.

Indication of any immediate medical attention and special treatment needed: No data available.

5. FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Special hazards arising from the substance or mixture: Sulphur oxides, Iron oxides.

Advice for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

Further information: The product itself does not burn.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Avoid breathing dust. For personal protection see Section 8.

Environmental precautions: Do not let product enter drains.

Methods and materials for containment and cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Reference to other sections: For disposal see Section 13.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see Section 2.

Conditions for safe storage, including any incompatibilities: Keep container tightly closed in a dry and well-ventilated place. Air sensitive. Store under inert gas. Hygroscopic.

Specific end use(s): Apart from the uses mentioned in Section 1 no other specific uses are stipulated.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Ferrous sulfate Heptahydrate	7782-63-0	TWA	1 mg/m^3	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Upper Respiratory Tract & skin irritation varies		
		TWA	1 mg/m^3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	1 mg/m^3	USA. NIOSH Recommended Exposure Limits

Exposure Controls

Appropriate engineering controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal Protective Equipment

Eye/face protection: Safety glasses with side-shields.

Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body protection: Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: For nuisance exposures use a particle respirator. For higher level protection use type, wear NIOSH approved air-purifying respirator with cartridges/canisters.

Control of environmental exposure: Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State:	Solid	
Appearance:	Blue Green crystals	Odor: No data available
Color:	Blue-Green	Odor Threshold: No data available

Property	Values
pH	3.0 – 4.0 @ 50 g/l @ 25° C (77° F)
Melting/freezing point	Melting point/range: 64° C (147° F)
Flash Point	No data available
Evaporation Rate	No data available
Flammability (solid, gas)	No data available
Flammability Limit in Air	
Upper flammability limit	No data available
Lower flammability limit	N/A
Vapor pressure	No data available
Vapor density	No data available
Specific Gravity	No data available
Water solubility	No data available

Property	Values
Solubility in other solvents	No data available
Partition coefficient: n-octanol/water	No data available
Autoiginition temperature	No data available
Decomposition temperature	No data available
Kinematic viscosity	No data available
Dynamic viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

Other Information

Bulk density	1,300 kg/m^3

10. STABILITY AND REACTIVITY

Reactivity: No data available.

Chemical Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: No data available.

Hazardous: Polymerization: No data available.

Conditions to Avoid: No data available.

Incompatible Materials: Strong oxidizing agents.

Hazardous Decomposition Products: Other decomposition products – no data available. In the event of a fire see Section 5.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product information	Inhalation	No data available
	Eye contact	No data available
	Skin contact	No data available
	Ingestion	Harmful if swallowed

Component Information

Information on toxicological effects

Symptoms No data available

Delayed and immediate effects as well as chronic effects from short & long-term exposure

Sensitization:	No data available.
Mutagenic effects:	No data available.
Carcinogenicity:	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
STOT-single exposure:	No data available.
STOT-repeated exposure:	No data available.
Chronic toxicity:	No data available.
Target organ exposure:	No data available.
Aspiration hazard:	No data available.

Numerical measure of toxicity product information

The following values are calculated based on Section 3 of the GHS document: No data available.

12. ECOLOGICAL INFORMATION

Ecotoxicty: No data available.

Persistence and Degradability: No data available.

Bioaccumulation: No data available.

Other adverse effects: No data available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal methods	Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
Contaminated packaging	Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)	UN Number: 3077 Class: 9 Packing group: III
Proper shipping name	Environmentally hazardous substance, solid, n.o.s. (Ferrous Sulfate Heptahydrate) Reportable Quantity (RQ): 1,000 lbs Marine pollutant: No Poison Inhalation Hazard: No
IMDG	Not dangerous goods.
IATA	Not dangerous goods.

15. REGULATORY INFORMATION

INTERNATIONAL INVENTORIES

TSCA:	CAS# 7782-63-0 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS# for the anhydrous form is on the inventory (40CFR720.3(u)(2)). CAS# 7720-78-7 is listed on the TSCA Inventory.
DSL:	CAS# 7720-78-7 is listed on Canada's DSL List.

US Federal Regulations

SARA 313:	SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA + Title III, Section 313.
SARA 311/312 Hazard Categories:	Acute health hazard Chronic health hazard
CWA (Clean Water Act)	Section 311 Hazardous Substances (40 CFR 117.3) Sulfuric acid, Iron (2) salt (1:1), Heptahydrate Reportable quantity: 1000 lbs.
CERCLA	(40 CFR 302.4) Sulfuric acid, Iron (2) salt (1:1), Heptahydrate Reportable quantity: 1000 lbs.

US State Regulations

California Prop. 65 Components	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

US State Right-to-Know Regulations

Massachusetts Right-to-Know Components:

Ferrous Sulfate Heptahydrate	CAS-No. 7782-63-0	Revision Date: 1993-04-24

Pennsylvania Right-to-Know Components:

Ferrous Sulfate Heptahydrate	CAS-No. 7782-63-0	Revision Date: 1993-04-24

New Jersey Right-to-Know Components:

Ferrous Sulfate Heptahydrate	CAS-No. 7782-63-0	Revision Date: 1993-04-24

International Regulations

Canada **WHMIS Hazard Class:** Uncontrolled product; Disclosure at 1%.

16. OTHER INFORMATION

NFPA Rating	Health hazard: 2	Fire Hazard: 0	Reactivity Hazard: 0
HMIS Rating	Health hazard: 2 Physical Hazard 0	Chronic Health Hazard:	Flammability: 0

Further information

This SDS summarizes to the best of our knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since QC LLC cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. QC LLC and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.qccorporation.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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