

SAFETY DATA SHEET



Zinc Sulfate Monohydrate

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

GHS Product Information

Product Name: Zinc Sulfate Monohydrate
Business Unit: PhibroChem
Other means of identification: Not available

Safety data sheet number: 2212-200 -US-E

Recommended use of the chemical and restrictions on use

Recommended use: No information available.

Uses advised against: No information available

Details of the supplier of the safety data sheet

Supplier:

Phibrochem
Glenpointe Centre East, 3rd FL
300 Frank W. Burr Blvd., Ste 21
Teaneck, NJ 07666-6712
Tel: (201) 329-7300
Toll free: (888) 475-7355
Fax: (201) 329-7070

SDS Contact (email of responsible person): phibroehs@pahc.com

24 Hour Emergency Phone Number: Chemtrec 1-800-424-9300 (CCN17224)

International: International Number: +1 703-527-3887

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral

Category 4

Label elements

Emergency Overview

Warning

Hazard statements

Harmful if swallowed



Appearance granules

Physical state Solid

Odor Odorless

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Precautionary Statements - Disposal

Dispose of contents/ container to an approved landfill

Hazards not otherwise classified (HNOC)

Other Information

Other hazards

- Very toxic to aquatic life with long lasting effects
- Very toxic to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture Substance

Chemical Name	CAS No	Weight-%	Trade Secret
Zinc sulfate, monohydrate	7446-19-7	60 - 100	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First aid measures

- General advice:** Call 911 or emergency medical service. Remove and isolate contaminated clothing and shoes.
- Eye contact:** In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Inhalation:** Move victim to fresh air. If breathing is irregular or stopped, administer artificial respiration. Administer oxygen if breathing is difficult.
- Skin Contact:** Consult a physician if necessary. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is not required. If skin irritation persists, call a physician.
- Ingestion:** Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician immediately.

Self-protection of the first aider: Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

Most important symptoms and effects, both acute and delayed

Symptoms: No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media: Dry chemical, CO₂, water spray or regular foam. Water spray, fog or regular foam. Move containers from fire area if you can do it without risk. Dike fire-control water for later disposal.

Unsuitable extinguishing media: Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical: Some may burn but none ignite readily. Those substances designated with a "P" may polymerize explosively when heated or involved in a fire. Some may be transported hot.

Explosion data

Sensitivity to Mechanical Impact: None.

Sensitivity to Static Discharge: None.

Protective equipment and precautions for firefighters: Wear self contained breathing apparatus for fire fighting if necessary. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions: Do not touch or walk through spilled material. Stop leak if you can do it without risk.

For emergency responders: Use personal protection recommended in Section 8. Use personal protective equipment as required.

Environmental Precautions: Prevent entry into waterways, sewers, basements or confined areas. See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment: Prevent dust cloud.

Methods for cleaning up: With clean shovel place material into clean, dry container and cover loosely; move containers from spill area. Take up with sand or other non-combustible absorbent material and place into containers for later disposal. Cover liquid spill with sand, earth or other non-combustible absorbent material. Cover powder spill with plastic sheet or tarp to minimize spreading.

Personal precautions, protective equipment and emergency procedures

Personal precautions: Do not touch or walk through spilled material. Stop leak if you can do it without risk.

For emergency responders: Use personal protection recommended in Section 8. Use personal protective equipment as required.

Environmental Precautions: Prevent entry into waterways, sewers, basements or confined areas. See Section 12 for additional ecological information.

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7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling: Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Use with local exhaust ventilation.

Conditions for safe storage, including any incompatibilities

Storage Conditions: Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

Incompatible materials: None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering Controls: Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

General Hygiene Considerations: When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Regular cleaning of equipment, work area and clothing is recommended.

Eye/face protection: Tight sealing safety goggles. Face protection shield.

Skin and body protection: No special technical protective measures are necessary.

Respiratory protection: If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Solid

Appearance	granules	Odor	Odorless
Color	white	Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	5.9 @10% soln	
Melting Point / Freezing Point	> 460 °F	
Boiling point / boiling range	> 932 °F	
Flash point	No information available	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Specific Gravity	3.28	
Water solubility	No information available	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	179.46
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available
Percent Volatile	<1

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Extremes of temperature and direct sunlight.

Incompatible materials

None known based on information supplied.

Hazardous Decomposition Products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information:	No data available
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Inhalation: No data available.
Eye contact: No data available.
Skin Contact: No data available.
Ingestion: No data available.

Information on toxicological effects

Symptoms: No information available.

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

Sensitization: No information available.
Germ cell mutagenicity: No information available.
Carcinogenicity: No information available.

Reproductive toxicity: No information available.
STOT - single exposure: No information available.
STOT - repeated exposure: No information available.
Chronic toxicity: Avoid repeated exposure.
Aspiration hazard: No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .
ATEmix (oral) 500 mg/kg 500

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life with long lasting effects
0% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Mobility
No information available.

Other adverse effects: No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes: Refer to all federal, state and local regulations prior to disposal of container and unused contents by reuse, recycle or disposal. Disposal should be in accordance with applicable regional, national and local laws and regulations. Avoid runoff to waterways and sewers. Recover or recycle if possible. Send to a licensed recycler, reclaimer or incinerator.

Disposal methods: Do not reuse container.

14. TRANSPORT INFORMATION

Note: Store in a closed container. Keep container upright.

DOT

UN/ID no	UN3077
Proper shipping name	Environmentally hazardous substance, solid, n.o.s. (Zinc sulfate, monohydrate)
Hazard Class	9
Packing Group	III
Special Provisions	146, 335, A112, B54, B120, IB8, IP3, N20, T1, TP33, 8
Description	UN3077, Environmentally hazardous substance, solid, n.o.s. (Zinc sulfate, monohydrate), 9, III
Emergency Response Guide Number	171

IATA

UN/ID no	UN3077
Proper shipping name	Environmentally hazardous substance, solid, n.o.s. (Zinc sulfate, monohydrate)
Hazard Class	9
Packing Group	III
ERG Code	9L
Special Provisions	A158, A179, A97
Description	UN3077, Environmentally hazardous substance, solid, n.o.s. (Zinc sulfate, monohydrate), 9, III

IMDG

UN/ID no	UN3077
Proper shipping name	Environmentally hazardous substance, solid, n.o.s. (Zinc sulfate, monohydrate)
Hazard Class	9
Packing Group	III
EmS-No	F-A, S-F
Special Provisions	274, 335, 966, 967
Description	UN3077, Environmentally hazardous substance, solid, n.o.s. (Zinc sulfate, monohydrate), 9, III

15. REGULATORY INFORMATION

International Inventories

TSCA:	Complies
DSL/NDSL:	Complies
EINECS/ELINCS:	Not Determined
ENCS:	Not Determined
IECSC:	Complies
KECL:	Not Determined
PICCS:	Complies
AICS:	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No	SARA 313 - Threshold Values %
Zinc sulfate, monohydrate	7446-19-7	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CAS No	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Zinc sulfate, monohydrate	7446-19-7	1000lbs	X	-	-

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

FIFRA

Not applicable

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

No information available

Chemical Name	CAS No	New Jersey	Massachusetts	Pennsylvania
Zinc sulfate, monohydrate	7446-19-7	X	-	X

Canada

No information available

16. OTHER INFORMATION

NFPA	Health hazards 2	Flammability 0	Instability 0	Physical & Chemical Properties 0
HMIS	Health hazards 2	Flammability 0	Physical hazards 0	Personal protection E

Document Review

Revision Number: 4

Revision Note: No information available

Key or legend to abbreviations and acronyms used in the safety data sheet:

Bioconcentration factor (BCF)
International Air Transport Association (IATA)
Globally Harmonized System (GHS)
International Maritime Dangerous Goods (IMDG)

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End of Safety Data Sheet