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Version : 1.0

SAFETY DATA SHEET

Zinc Sulfate Monohydrate 35.5% Zinc

Section 1. Identification

GHS product identifier : Zinc Sulfate Monohydrate w/ 35.5% Zinc
Product type : Solid

Uses

Area of application : Not Applicable

Supplier

Supplier's details : Greenway Biotech, Inc.

Address

Street : 10632 Painter Ave
Postal code : 90670
City : Santa Fe Springs
Country : United States

Telephone number : +1 562-351-5168

e-mail address of person responsible for this SDS : sales@greenwaybiotech.com

Emergency telephone number (with hours of operation) : US: Chemtrec 24-hours Emergency Response: 1-800-424-9300
Canada: 24 Hour Emergency Service, (Canutec 613-996-6666)

National advisory body/Poison Center

Name : The National Poisons Emergency number
Telephone number : 1 800 222 1222

Section 2. Hazards identification

Physical state : Solid.

Odor : Odorless.

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained available for employees and other users of this product.

Routes of entry	:	Ingestion Inhalation Dermal
Inhalation	:	May Irritate the respiratory tract if inhaled.
Ingestion	:	May be harmful if swallowed.
Skin	:	May cause skin irritation.
Eyes	:	May cause sever eye irritation.
Chronic effects	:	No known significant effects or critical hazards.
Carcinogenicity	:	No known significant effects or critical hazards.
Mutagenicity	:	No known significant effects or critical hazards.
Teratogenicity	:	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.

Section 3. Composition/information on ingredients

United States

Chemical Name	CAS-Number	% Content
Sulfuric acid, zinc salt (1:1), monohydrate	7446-19-7	99%

Canada

Chemical Name	CAS-Number	% Content
Sulfuric acid, zinc salt (1:1), monohydrate	7446-19-7	99%

Mexico

Chemical Name	CAS-Number	% Content
Sulfuric acid, zinc salt (1:1), monohydrate	7446-19-7	99%

There are no additional ingredients present which, within the current know of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Section 4. First aid measures

Inhalation: Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt, or waistband. Get medical attention if symptoms occur.

Eye contact: Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting upper and lower eyelids. Get medical attention if symptoms occur.

Skin contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur.

Ingestion: Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.

Protection of first aiders: No action shall be taken involving any personal risk or without suitable training.

Notes to physician: No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Section 5. Fire Fighting Measures

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.
- Special exposure hazards vicinity** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving personal risk or without suitable training.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
Sulfur oxides
Metal oxide/oxides
- Flamibility of the product** : No specific fire or explosion hazard.
- Special protective equipment self- for fire fighters** : Fire-fighters should wear appropriate protective equipment and contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precaution:

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment (see section 8).

Environmental precautions:

Avoid dispersal of spilled material and runoff into waterways, drains, and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers or waterways).

Small spill: Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill: Move containers from the spill area. 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

Precautions for safe handling:

Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas.

Conditions for safe storage:

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Keep out of reach of children.

Section 8. Exposure controls / personal protection

Recommended monitoring procedures:

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures:

No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory 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.

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.

Eyes:

Safety eyewear complying with an approved standard should be used when a risk assessment indicates that this is necessary to avoid exposure to dusts.

Skin:

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

Personal protective equipment (pictograms):



Environmental exposure controls:

Emission 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

Physical state	: Solid
Flash point	: Non-Flammable
Flammable limits	: Non-Flammable
Color	: White (Light)
Odor	: Odorless
Molecular Weight	: 179.47 g/mol
Molecular Formula	: ZnSO ₄ – H ₂ O
Boiling/condensation point	: 740 C (Decomposes)
Vapor density	: Not applicable
VOC	: 0% (w/w)
Solubility	: Not soluble in alcohol
Viscosity	: Not applicable

Section 10. Stability and Reactivity

Hazardous polymerization	: Under normal conditions of storage and use, hazardous polymerization will not occur.
Chemical stability	: This product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Reactions	: will not occur.
Conditions to avoid	: No specific data.
Materials to avoid	: No specific data.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous Decomposition products should not be produced.

Section 11. Toxicological information

United States Mexico, and Canada

Skin:

May be irritating to the skin.

Eyes:

Possible eye irritant.

Respiratory:

May be a respiratory irritant.

Sensitizer

Skin:

Not considered a sensitizer.

Respiratory:

Not considered a sensitizer.

Carcinogenicity

Not classified as carcinogenic, teratogenic and mutagenic

Mutagenicity

Not classified as carcinogenic, teratogenic and mutagenic

Teratogenicity

Not classified as carcinogenic, teratogenic and mutagenic

Section 12. Ecological Information

Environmental Effects: No known significant effects or critical hazards.

Section 13. Disposal Considerations




Waste Disposal:

The generation of waste should be avoided or minimized whenever possible. Significant quantities of waste product residues should not be disposed of via the fowl sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional and local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposal of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulation.

Refer to section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL

Section 14. Transport information

Regulatory Information	UN Number	Shipping Name	Classes	PG*	Label	Additional Information
DOT Classification	3077	Zinc Sulphate (Hydrous). Marine pollutant	9	III		Special Provisions: Regulated if greater than the reportable quantity: 1,000 LBS (454 KG)
TDG Classification	3077	Zinc Sulphate (Hydrous). Marine pollutant	9	III		Special Provisions: Regulated if greater than the Reportable quantity: 1,000 LBS (454 KG)
Mexico Classification	3077	Zinc Sulphate (Hydrous). Marine pollutant	9	III		

Section 15. Regulatory information

United States

HCS Classification : Not regulated

U.S. Federal regulations : **TSCA 8(a) IUR Exempt/Partial exemption:** Not determined
United States inventory (TSCA 8b): All components are listed or exempted

SARA 302/304/311/312 extremely hazardous Substances: No products were found.
SARA 302/304 emergency planning and notification:

No products were found.
SARA 302/304/311/312 hazardous chemicals: No Products were found.
SARA 311/312 MSDS distribution – chemical inventory

- **Hazard identification:** No products were found.

Clean Water Act (CWA) 307: Sulfuric acid, zinc salt (1:1), monohydrate

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances	:	Not listed
Clean Air Act Section 602 Class II Substances	:	Not listed
DEA List I Chemicals (Precursor Chemicals)	:	Not listed
DEA List II Chemicals (Essential Chemicals)	:	Not listed
State regulations	:	<p>Connecticut Carcinogen Reporting: None of the Components are listed.</p> <p>Connecticut Hazardous Material Survey: None of the Components are listed</p> <p>Florida substances: None of the components are listed.</p> <p>Illinois Chemical Safety Act: None of the components listed</p> <p>Illinois Toxic Substances Disclosure to Employee Act: None of the components are listed.</p> <p>Louisiana Reporting: None of the components are listed.</p> <p>Louisiana Spill: None of the components are listed.</p> <p>Massachusetts Spill: None of the components are listed.</p> <p>Massachusetts Substances: None of the components listed.</p> <p>Michigan Critical Material: None of the components listed.</p> <p>Minnesota Hazardous Substances: None of the components are listed.</p> <p>New Jersey Hazardous Substances: The following Components are listed: ZINC compounds</p> <p>New Jersey Spill: None of the components are listed.</p> <p>New Jersey Toxic Catastrophe Prevention Act: None of the components are listed.</p> <p>New York Acutely Hazardous Substances: None of Components are listed.</p> <p>New York Toxic Chemical Release Reporting: None of the components are listed.</p> <p>Pennsylvania RTK Hazardous Substances: The following components are listed: ZINC COMPOUNDS</p> <p>Rhode Island Hazardous Substances: None of the Components are listed.</p>
United States inventory (TSCA 8b)	:	All components are listed or exempted.
WHMIS (Canada)	:	Not controlled under WHMIS (Canada).
Canadian lists	:	<p>CEPA Toxic substances: None of the components are Listed.</p> <p>Canadian ARET: None of the components are listed.</p> <p>Canadian NPRI: The following components are listed:</p>

Zinc

Alberta Designated Substances: None of the Components are listed.

Ontario Designated Substances: None of the components are listed.

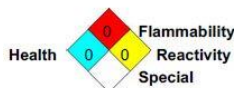
Quebec Designated Substances: None of the Components are listed.

Canada inventory : All components are listed or exempt.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Mexico

Classification :



EU regulations

Hazard symbol or Symbols :



Risk Phrases :

R22- Harmful if swallowed.
R41- Risk of serious damage to eyes.
R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases :

of

S2- Keep out of the reach of children.
S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S29- Do not empty into drains.
S39- Wear eye/face protection.
S46- If swallowed, seek medical advice immediately and show container or label.
S61- Avoid release to the environment. Refer to special instructions/safety data sheet.

this

International regulations

International lists :

exempted.

Australia inventory (AICS): All components are listed or exempted.

China inventory (IECSC): All components are listed or

Japan inventory: All components are listed or exempted.

Korea inventory: All components are listed or exempted.

New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.

Philippines inventory (PICCS): All components are listed or exempted.

Chemical Weapons Convention List :

Not listed

Schedule I Chemicals

Chemical Weapons Convention List
Schedule II Chemicals

Chemical weapons Convention List
Schedule III Chemicals

Section 16. Other information

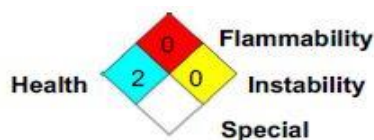
Label Requirements : NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

Health	2
Flammability	0
Physical hazards	0

Hazardous Material Information System (U.S.A)

Caution: HMIS ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS ratings are not required on MSDS under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS ratings are to be used with a fully implemented HMIS program. HMIS is a registered mark of the National Paint & Coatings Association (NPCA). HMIS materials may be purchased exclusively from J.J Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material. Suggested protective clothing might not be adequate. Consult a specialist before handling this product.



National Fire Protection Association (U.S.A)

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*Indicates information that has changed from the previous version.

Notice to Reader:

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