

Zinc Sulfate Monohydrate

Safety Data Sheet

SECTION 1: Identification

1.1 Identification

Product Form	Substance
Substance name	Zinc Sulfate Monohydrate
CAS-No.	7446-19-7
Formula	ZnSO ₄ • H ₂ O

1.2 Recommended use and restrictions on use

Use of the substance	Nutrient; Dietary Supplement
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1.3 Supplier

Name	Chemlock Nutrition
Address	9100 W Chester Towne Ctr Ste 345, Cincinnati, OH 45069
Telephone	(513) 770-0577
Email	answers@chemlocknutrition.com

1.4 Emergency Contact Information

CHEMTREC	(800) 424-9300
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SECTION 2: Hazard(s) identification

2.1 Classifications of substance or mixture

GHS-US classification

2.2 GHS Label elements, including precautionary statements

Hazard pictograms Health Hazard



Hazardous to the environment



Corrosive



Signal word

Danger

Hazard statements

H302

Harmful if swallowed

H318

Causes serious eye damage

H400

Very toxic to aquatic life

H410

Very toxic to aquatic life with long-lasting effects

Precautionary statements

P101

If medical advice is needed, have product container or label at hand.

P102

Keep out of reach of children.

P103

Read label before use.

P270

Do not eat, drink or smoke when using this product.

P280

Wear protective gloves/protective clothing/eye protection/face protection.

Wash... thoroughly after handling

P273

Avoid release to the environment.

P310

Immediately call a POISON CENTER/doctor/...

P305+351+338

IF IN EYES Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.

P330

Rinse mouth.

P301+312

IF SWALLOWED Call a POISON CENTER/doctor/.../if you feel unwell.

P391


Collect spillage.

P501


Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3 Other Non-GHS Classification:

WHMIS

D2B 

NFPA/HMIS



NFPA SCALE (0-4)

Health	2
Flammability	0
Physical Hazard	0
Personal Protection	X

HMIS RATINGS (0-4)

SECTION 3: Composition/Information on ingredients

Ingredients:		
CAS 7446-20-0	Zinc Sulfate, ACS	100%
		Percentages are by Weight

SECTION 4: First-aid measures

4.1. Description of first aid measures

After inhalation:	Loosen clothing as necessary and position individual in a comfortable position. Remove to fresh air. Give artificial respiration if necessary. Seek immediate medical attention or advice. If breathing is difficult, give oxygen.
After skin contact:	Wash affected area with soap and water. Rinse area with water for 10-15 minutes. Seek immediate medical attention or advice.
After eye contact:	Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Seek medical attention immediately.
After swallowing:	Rinse mouth thoroughly. Do not induce vomiting. Seek immediate medical attention or advice. Have exposed individual drink sips of water or milk.

4.2. Most important symptoms and effects (acute and delayed)

Irritation, nausea, headache, shortness of breath, burning of eyes, redness, tearing, eye damage.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media If in laboratory setting, follow laboratory fire suppression procedures. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

5.2. Specific hazards arising from the chemical

Combustion products may include carbon oxides or other toxic vapors.

5.3. Special protective equipment and precautions for fire-fighters

Additional information (precautions): Move product containers away from fire or keep cool with water spray as a protective measure, where feasible.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Avoid contact with skin and eyes, and clothing. Use respiratory protective device against the effects of fumes/dust/aerosol. Keep unprotected persons away. Ensure adequate ventilation. Keep away from ignition sources. Protect from heat. Stop the spill, if possible. Contain spilled material by diking or using inert absorbent. Transfer to a disposal or recovery container.

6.2. Environmental precautions

Prevent from reaching drains, sewer or waterway. Collect contaminated soil for characterization per Section 13. Do not allow this material to enter the environment.. Clean up spills immediately.

6.3. Methods and material for containment and cleaning up

If in a laboratory setting, following Chemical Hygiene Plan procedures. Collect liquids using vacuum or by use of absorbents. Place into properly labeled containers for recovery or disposal. If necessary, use trained response staff/contractor. Clean up spills immediately. Always obey local regulations.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling

Prevent formation of aerosols. Follow good hygiene procedures when handling chemical materials. Do not eat, drink, smoke or use personal products when handling chemical substances. If in a laboratory setting, follow Chemical Hygiene Plan. Use only in well ventilated areas. Avoid splashes or spray in enclosed areas.

7.2. Conditions for safe storage, including any incompatibilities

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Store away from foodstuffs. Store away from oxidizing agents. Store in cool, dry conditions in well sealed containers. Keep container tightly sealed.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No applicable occupational exposure limits

8.2. Appropriate engineering controls

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits.

8.3. Individual protection measures/Personal protective equipment

Respiratory Protection:

Not required under normal conditions of use. Use suitable respiratory protective device when high concentrations are present. Use suitable respiratory protective device when aerosol or mist is formed. For spills, respiratory protection may be advisable.

Protection of Skin:

The glove material has to be impermeable and resistant to the product/the substance/the preparation being used/handled. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Eye Protection:

Safety glasses with side shields or goggles.

General Hygienic Measures:

The usual precautionary measures are to be adhered to when handling chemicals. Keep away from food, beverages, and feed sources. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases/fumes/dust/mist/vapor/aerosols. Avoid contact with the eyes and skin.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance (physical state, color):	White Crystals
Odor:	Odorless
Odor Threshold:	Not determined
pH-value:	4.0-6.0 aq sol
Melting/Freezing point:	100 C/212 F
Boiling point/Boiling range:	Not determined
Flash point (closed cup):	Not applicable
Evaporation rate:	Not determined
Flammability (solid, gas)	Not applicable
Density:	Not determined
Explosion Limits:	Not determined
Vapor Pressure:	Not determined
Vapor Density:	Not determined
Relative Density:	3.54 @ 25C
Solubilities:	430g/l in water
Partition coefficient (n-octanol/water):	Not determined
Auto/Self-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Viscosity:	a. Kinematic: Not Determined b. Dynamic: Not Determined

SECTION 10: Stability and reactivity

10.1. Reactivity

Not available

10.2. Chemical stability

No decomposition if used and stored according to specifications

10.3. Possibility of hazardous reactions

Not available

10.4. Conditions to avoid

Store away from oxidizing agents, strong acids or bases. Dust. Excess heat.

10.5. Incompatible materials

Strong bases. Calcium. Strontium salts. Alkali carbonates and hydroxides. Silver protein and tannins. Lead.

10.6. Hazardous decomposition products

Zinc oxides. Sulfur oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute Toxicity:	Not classified	
Oral:	1260mg/kg	LD50 rat:
Chronic Toxicity	No additional information	
Corrosion Irritation:	Not classified	
Ocular:	Section 2	Classified as eye damage
Sensitization:	No additional information	
Single Target Organ (STOT):	No additional information	
Numerical Measures:	ATE (oral): 5000mg/kg	
Carcinogenicity:	No additional information	
Mutagenicity:	No additional information	
Reproductive Toxicity:	Experiments have shown reproductive toxicity in laboratory animals.	

SECTION 12: Ecological information

12.1. Ecotoxicity Persistence and Degradability:

Readily degradable in the environment.

12.3. Bioaccumulative potential

No information available.

12.4. Mobility in soil

Aqueous solution has high mobility in soil.

12.5. Other adverse effects

Do not allow this material to enter the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/containers must not be disposed together with household garbage. Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Consult federal state/provincial and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product.

SECTION 14: Transport information

Department of Transportation (DOT)

Transport document description	UN3077 Environmentally hazardous substances, solid, n.o.s. (zinc sulfite), 9, III
UN-No.(DOT)	UN3077
Proper Shipping Name (DOT)	Environmentally hazardous substances, solid, n.o.s. (Zinc sulfite)
Class (DOT)	9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140
Packing group (DOT)	III - Minor Danger
Hazard labels (DOT)	9 - Class 9 (Miscellaneous dangerous materials)
Marine pollutant	Yes
Symbols:	Class 9





SECTION 15: Regulatory information

15.1. US Federal regulations (USA)

SARA Section 311/312 (Specific toxic chemical listings):	Acute
SARA Section 313 (Specific toxic chemical listings):	7446-20-0 Zinc (Compounds) [313c]
RCRA (hazardous waste code):	None of the ingredients is listed
TSCA (Toxic Substances Control Act):	All ingredients are listed
CERCLA: (Comprehensive Environmental Response, Compensation and Liability Act):	7446-20-0 Zinc Sulfate

15.2. International regulations

Canada	
Canadian Domestic Substances List (DSL):	All ingredients are listed.
Canadian NPRI Ingredient Disclosure list (limit 0.1%):	None of the ingredients are listed.
Canadian NPRI Ingredient Disclosure list (limit 1%):	None of the ingredients are listed.

15.3. US State regulations

Proposition 65 (California):	
Chemicals known to cause cancer:	None of the ingredients listed.
Chemicals known to cause reproductive toxicity for females:	None of the ingredients listed.
Chemicals known to cause reproductive toxicity for males:	None of the ingredients listed.
Chemicals known to cause developmental toxicity:	None of the ingredients listed.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note: The responsibility to provide a safe workspace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

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