

Material Safety Data Sheet

Zinc Sulfate Monohydrate

Section 1 - Product Identification

Synonym : N.A.
Chemical Formula : N.A.
Company Identification : Tradeasia International Pte. Limited
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Recommended use : For feed additives

Section 2 – Hazards Identification

2.1. GHS classification

Acute toxicity, Oral (Category 4), H302
Serious eye damage/eye irritation (Category 1), H318
Short-term (acute) aquatic hazard (Category 1), H400
Long-term (chronic) aquatic hazard (Category 1), H410

2.2. GHS hazards and precautionary statements

Hazard statement(s)

H302 Harmful if swallowed.
H318 Causes serious eye damage.
H410 Very toxic to aquatic life with long lasting effects

Precautionary statement(s)

Prevention

P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear eye protection/ face protection.

Response

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.
Rinse mouth
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing. Immediately
call a POISON CENTER/ doctor.
P391 Collect spillage.

Disposal

P501

Dispose

2.3. Other hazards

None known.

Section 3 – Composition/Information on Ingredients

Chemical name	: Zinc Sulfate Monohydrate
Formula	: $\text{ZnSO}_4 \cdot \text{H}_2\text{O}$
CAS no.	: 7446-19-7
Concentration	: $\leq 100 \%$

Section 4 – First-Aid Measures

4.1. Description of first aid measures

Inhalation

After inhalation: fresh air.

Skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

Eye contact

After eye contact: rinse out with plenty of water. Immediately call the ophthalmologist. Remove contact lenses.

Ingestion

After swallowing: immediately make the victim drink water (two glasses at most). Consult a physician.

Section 5 – Fire Fighting Measures

5.1. General fire hazards

No unusual fire or explosion hazards noted.

5.2. Suitable Extinguishing media

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

5.3. Unsuitable Extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.4. Specific hazards arising from the chemical

Sulfur oxides

Zinc/zinc oxides

Not combustible.

Fire may cause evolution of: Sulfur oxides

Ambient fire may liberate hazardous vapours.

5.5. Special protective actions for fire-fighters

In the event of fire, wear self-contained breathing apparatus.

Section 6 – Accidental Release Measures

6.1. Methods and material for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.2. Environmental precautions

Do not let product enter drains

6.3. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Section 7 – Handling and Storage

7.1. Precautions for safe handling

For precautions see section 2.2.

7.2. Conditions for safe storage, including any incompatibilities

Tightly closed. Dry. Recommended storage temperature see product label.

Section 8 – Exposure Controls/Personal Protection

8.1. Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

Body Protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves.

Respiratory protection

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Control of environmental exposure

Do not let products enter drains.

Section 9 – Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Form : Solid

Color	: Off white
Odor	: Characteristic odor
pH (10%, 25°C)	: N.A.
Boiling Point/Range	: N.A.
Melting Point/Range	: N.A.
Decomposition Temperature	: N.A.
Bulk density	: ca.500 kg/m ³
Water Solubility (25°C)	: N.A.
Evaporation Rate	: N.A.
Water Reactive	: N.A.

Section 10 – Stability and Reactivity

10.1. Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

10.2. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.3. Conditions to avoid

Avoid moisture.

10.4. Incompatible materials

No data available.

10.6. Hazardous decomposition products

In the event of fire: see section 5

Section 11 – Toxicological Information

11.1. Health effects associated with ingredients

Acute toxicity	: LD50 Oral - Mouse - male - 926 mg/kg (OECD Test Guideline 401) Remarks: (anhydrous substance)(in analogy to similar products) The value is given in analogy to the following substances: Zinc sulphate
	LD50 Dermal - Rat - male and female - > 2,000 mg/kg (OECD Test Guideline 402) Remarks: (anhydrous substance) (in analogy to similar products) The value is given in analogy to the following substances: Zinc sulphate
Skin corrosion	: Skin - Rabbit Result: No skin irritation - 4 h (OECD Test Guideline 404)

Remarks: (anhydrous substance)(in analogy to similar products)
The value is given in analogy to the following substances: Zinc sulphate.

Eye irritation : Eyes - Rabbit
Result: Causes serious eye damage.
(OECD Test Guideline 405)
Remarks: (anhydrous substance)(in analogy to similar products)
The value is given in analogy to the following substances: Zinc sulphate.

Respiratory irritation : Local lymph node assay (LLNA) - Mouse
Result: negative
(ECHA)
Remarks: (anhydrous substance)(in analogy to similar products)
The value is given in analogy to the following substances: Zinc sulphate.

Chronic Effects of
Overexposure : None established
Medical Conditions Generally
Aggravated by Exposure : None
Carcinogenicity : N/A
Reproductive Toxicity : N/A
Teratogenicity : N/A
Mutagenicity : N/A
Name of toxicologically
synergistic products : N/A

Section 12 – Ecological Information

12.1. Toxicity

Toxic to fish, bacteria, algae and daphnia and other aquatic invertebrates

12.2. Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential

No information available.

12.4. Mobility in soil

No data available.

12.5. PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6. Other adverse effects

Biological effects: Bactericidal effect.

Hazard for drinking water supplies.
Further information on ecology
Discharge into the environment must be avoided.

Section 13 – Disposal Considerations

13.1. Disposal instructions

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

Section 14 – Transport Information

ADR/RID	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc sulphate monohydrate).
IATA-DGR	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc sulphate monohydrate)
IMDG	: Environmentally hazardous substance, solid, n.o.s. (Zinc sulphate monohydrate)

Section 15 – Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Notification status

AICS	: On the inventory, or in compliance with the inventory
DSL	: All components of this product are on the Canadian
DSL ENCS	: On the inventory, or in compliance with the inventory
ISHL	: On the inventory, or in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
NZIoC	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory

Additional Information

16.1. List of abbreviation and acronyms used in this MSDS

MSDS : Material Safety Data Sheets

CAS No : Chemical Abstracts Service number

16.2. Disclaimer of Liability

The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its accuracy, reliability or completeness. The conditions or methods of handling, storage use or disposal of the product are beyond our

control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the

handling, storage, use or disposal of the product. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.

This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.