



*Specialized in chemicals*

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## Material Safety Data Sheet

### Zinc Sulphate Monohydrate

#### Section 1: Chemical Product and Company Identification

**Molecular formula:** ZnSO<sub>4</sub>·H<sub>2</sub>O

**CAS Nr:** 7446-19-7

**Molecular weight:**179.48

**Synonyms:** Zinc sulfate monohydrate

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#### Section 2: Composition and Information on Ingredients

**Composition:**

<b>Name</b>	<b>CAS #</b>	<b>%By Weight</b>
Zinc sulphate monohydrate	7446-19-7	96

### Section 3: Hazards Identification

Hazard description:

Xn Harmful

N Dangerous for the environment

Information pertaining to particular dangers for man and environment

R 22 Harmful if swallowed.

R 41 Risk of serious damage to eyes.

R 50/53 Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment

Classification System

HMIS Ratings (Scale 0-4)

(Hazardous Materials Identification System)

HEALTH	1
FIRE	0
REACTIVITY	1

GHS Label Elements



3.1/3 – Toxic if swallowed.



3.3/1 – Causes serious eye damage.



4.1/4 – Very toxic to aquatic life with long lasting effects.

Prevention:

Wash thoroughly after handling.

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

Avoid release to the environment.

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

Response:

IF SWALLOWED: Immediately call POISON CENTER or doctor/physician.

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 or doctor/physician.

Specific treatment (see label).

Rinse mouth.

Collect spillage.

**Storage:**

Store locked up.

**Disposal:**

Disposal of contents/container in accordance with local/regional/national/international Regulations.

## Section 4: First Aid Measures

**After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

**After skin contact**

Immediately wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

**After eye contact**

Rinse opened eye for several minutes under running water. Then consult a doctor.

**After swallowing**

Seek immediate medical advice.

## Section 5: Fire and Explosion Data

**Suitable extinguishing agents**

Product is not flammable. Use fire fighting measures that suit the surrounding fire.

**Special hazards caused by material, its products of combustion or resulting gases**

In case of fire, the following can be released:

Sulfur dioxide (SO<sub>2</sub>)

Metal oxide

**Protective equipment**

Wear self-contained respirator.

Wear fully protective impervious suit.

## Section 6: Accidental Release Measures

**Person-related safety precautions**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation.

**Measures for environmental protection**

Do not allow material to be released to the environment without proper governmental permits.

**Measure for cleaning/collecting**

Pick up mechanically.

**Additional information**

See section 7 for information on safe handling. See section 8 for information on personal protection equipment. See

section 13 for disposal information.

## Section 7: Handling and Storage

### 7.1 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.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in cool place.

Keep container tightly closed in a dry and well-ventilated place. hygroscopic

### 7.3 Specific end uses

no data available

## Section 8: Exposure Controls/Personal Protection

### Additional information about design of technical systems

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

### Components with limit values that require monitoring at the workplace

Not required.

### Personal protective equipment

#### General protective and hygienic measures

The usual precautionary measures for handling chemicals should be followed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

#### Breathing equipment

Use suitable respirator when high concentrations are present.

#### Protection of hands

Impervious gloves

#### Eye protection

Safety glasses.

#### Body protection

Protective work clothing.

## Section 9: Physical and Chemical Properties

<b>General Information</b>	
<b>Form :</b>	Granule
<b>Color:</b>	White
<b>Odor:</b>	Odorless
<b>Change in condition</b>	
<b>Melting point/Melting range:</b>	100°C (212°F) ((-H <sub>2</sub> O))
<b>Boiling point/Boiling range:</b>	Not determined
<b>Sublimation temperature/start:</b>	Not determined
<b>Flash point:</b>	Not applicable
<b>Ignition temperature:</b>	Not determined
<b>Decomposition temperature:</b>	Not determined
<b>Danger of explosion:</b>	Product does not present an explosion hazard.
<b>Explosion limits:</b>	
<b>Lower:</b>	Not determined
<b>Upper:</b>	Not determined
<b>Vapor pressure:</b>	Not determined
<b>Density at 20 °C (68°F):</b>	3.35 g/cm <sup>3</sup>
<b>Solubility in/Miscibility with water:</b>	Soluble

## Section 10: Stability and Reactivity Data

### Thermal decomposition / conditions to be avoided

Decomposition will not occur if used and stored according to specifications.

### Materials to be avoided

None known.

### Dangerous reactions

No dangerous reactions known

### Dangerous products of decomposition

Sulfur dioxide

Metal oxide fume

## Section 11: Toxicological Information

**Acute toxicity:**

**Primary irritant effect:**

**on the skin:** Irritant to skin and mucous membranes.

**on the eye:** Irritating effect. Strong irritant with the danger of severe eye injury.

**Sensitization:** No sensitizing effects known.

**Subacute to chronic toxicity:**

Zinc containing fumes may cause metal fume fever. Effects include dry throat, metallic taste, chest pain, dyspnea, rales and dry cough. Several hours later, chills may occur with lassitude, malaise, fatigue, headache, back pain, muscle cramps, blurred vision, nausea, fever, perspiration, vomiting and leukocytosis.

**Additional toxicological information:**

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

## Section 12: Ecological Information

**Ecotoxicological effects:**

**Remark:** Very toxic for fish

**General notes:**

Do not allow product to reach ground water, water course or sewage system, even in small quantities. Danger to drinking water if even extremely small quantities leak into the ground. Also poisonous for fish and plankton in water bodies. Do not allow material to be released to the environment without proper governmental permits.

Very toxic for aquatic organisms

## Section 13: Disposal Considerations

**Product:**

**Recommendation:**

Consult state, local or national regulations to ensure proper disposal.

**Uncleaned packagings:**

**Recommendation:** Disposal must be made according to official regulations.

## Section 14: Transport Information

### UN number

ADR/RID: 3077

IMDG: 3077

IATA: 3077

UN proper shipping name ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc sulphate monohydrate)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc sulphate monohydrate)

IATA: Environmentally hazardous substance, solid, n.o.s. (Zinc sulphate monohydrate)

Transport hazard class(es)

ADR/RID: 9

IMDG: 9

IATA: 9

Packaging group ADR/RID: III IMDG: III IATA: III

Environmental hazards ADR/RID: yes IMDG Marine pollutant: yes IATA: yes

## Section 15: Other Regulatory Information

### National regulations

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

### Information about limitation of use:

For use only by technically qualified individuals.

This product contains zinc and is subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and 40CFR372.

## Section 16: Other Information

**References:** Not available.

**Other Special Considerations:** Not available.

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