

Safety Data Sheet: Zinc Sulfate Monohydrate

1. Identification

Product	Zinc Sulfate Monohydrate; CAS 7446-19-7; EC 231-793-3
Use	Professional ingredient and formulation development.
Company	Hainan Zhongxin Chemical Co., Ltd. (ZXCHEM)
Address	Room 1001, Building A, Caohejing Center, No. 1520 Gumei Road, Xuhui District, Shanghai, China
Telephone / email	+86-21-54265599 / sales@zxchem.com.cn
Emergency contact	ZXCHEM office number above, office hours, China time (UTC+8). For urgent medical assistance contact local emergency services.
Scope	Reference safety information for Zinc Sulfate Monohydrate. The reference composition, concentration and supply-grade differences are described in Section 3. This document does not certify the composition or transport status of a specific delivered batch or a different formulation.

2. Hazards Identification

Classification	Acute oral toxicity Category 4; serious eye damage Category 1; acute aquatic toxicity Category 1; chronic aquatic toxicity Category 1.
Signal word / symbols	Danger; GHS05, GHS07, GHS09
Hazard statements	H302: harmful if swallowed. H318: serious eye injury. H400/H410: very high aquatic toxicity with lasting effects.
Prevention	Control dust through effective local extraction. Wear chemical-resistant gloves, protective clothing and splash goggles with a face shield where needed. Avoid ingestion and eye exposure; use suitable particulate respiratory protection where the workplace assessment requires it.
Response	After exposure, stop work and seek medical advice. For severe exposure obtain urgent medical care. Rinse contaminated skin or eyes with water; move an inhalation casualty to fresh air.
Environment	Prevent uncontrolled release to drains, soil or surface water. Collect spills for appropriate disposal.



3. Composition / Information on Ingredients

Reference ingredient	Zinc sulfate monohydrate, CAS 7446-19-7, EC 231-793-3. Supply zinc ≥35.0%; elemental zinc assay is not the percentage of the entire hydrated compound. No unverified impurity or additive fraction is assigned.
Supply grade	Zinc ≥35.0%
Applicability	The cited concentration or purity describes the reference material. It is not a certificate of analysis for the delivered batch; different solvents or dilutions require the matching supplier safety document.

4. First-Aid Measures

General	Protect the rescuer from exposure and show the product information to medical personnel. Obtain medical advice if symptoms occur or exposure is significant.
Inhalation	Move to fresh air and keep the person comfortable. Seek medical care for breathing difficulty or persistent symptoms. Avoid exposing rescuers to dust.
Skin	Remove contaminated clothing and rinse skin thoroughly with water. Seek medical advice for persistent irritation.
Eyes	Rinse gently with clean water for at least 15 minutes. Remove contact lenses when easy and continue rinsing. Obtain urgent medical care.
Ingestion	Rinse the mouth. Do not induce vomiting. Give nothing by mouth to an unconscious person. Obtain medical advice.
Effects / treatment	Swallowing can cause harmful exposure. Eye contact can cause serious injury. Prevent dust inhalation, ingestion and skin or eye exposure. Treatment is symptomatic and directed by a clinician.

5. Fire-Fighting Measures

Extinguishing media	Choose extinguishing media suited to the surrounding fire. Firefighters require self-contained respiratory protection and protective clothing; contain contaminated firewater because of the aquatic hazard.
Hazards	Non-combustible inorganic material. Fire or thermal decomposition can release sulfur oxides and zinc oxides.
Protection	Firefighters require suitable protective clothing and self-contained breathing equipment. Prevent contaminated firefighting water entering drains.

6. Accidental Release Measures

Personnel	Isolate the spill and provide ventilation. Use chemical-resistant gloves and eye protection; avoid contact and dust exposure.
Environment	Contain the release and protect drains and waterways. Report significant environmental contamination to the responsible authority.
Cleanup	Collect spilled solid without raising dust into closed labelled containers.

7. Handling and Storage

Handling	Control dust through effective local extraction. Wear chemical-resistant gloves, protective clothing and splash goggles with a face shield where needed. Avoid ingestion and eye exposure; use suitable particulate respiratory protection where the workplace assessment requires it.
Storage	Store tightly closed in a cool, dry and well-ventilated place. Protect from moisture, retain intact liners, and segregate from strong oxidizers. Prevent release to drains or surface water.
Incompatibilities	Strong oxidizing agents; moisture.

8. Exposure Controls / Personal Protection

Exposure limits	The selected reference does not establish a substance-specific occupational exposure limit. Apply current local requirements and effective dust control.
Engineering controls	Use local extraction where dust can be generated. Maintain accessible eyewash and emergency washing facilities.
Personal protection	Wear chemical-resistant gloves selected for the task, suitable protective clothing and splash goggles. Add face protection for splash-prone tasks.
Respiratory protection	Use a properly selected respirator under a respiratory-protection program where engineering controls do not adequately limit airborne exposure.
Hygiene	Wash after handling, remove contaminated clothing promptly and do not eat, drink or smoke in the work area.

9. Physical and Chemical Properties

Appearance	White powder or granules
Formula / molecular weight	ZnSO ₄ ·H ₂ O / 179.47 g/mol
Physical state, supply TDS	White powder or granules
Formula	ZnSO ₄ ·H ₂ O
Molecular weight	179.47 g/mol
Zinc, supply specification	≥35.0%
Other properties	Product-specific values for odor threshold, vapor pressure, partition coefficient, autoignition temperature and viscosity are not supplied by the selected reference set. No values are inferred.

10. Stability and Reactivity

Stability	Handle and store under the recommended conditions. Prevent contamination and unnecessary heating.
Incompatibilities	Strong oxidizing agents; moisture.
Decomposition	Non-combustible inorganic material. Fire or thermal decomposition can release sulfur oxides and zinc oxides.

11. Toxicological Information

Exposure effects	Swallowing can cause harmful exposure. Eye contact can cause serious injury. Prevent dust inhalation, ingestion and skin or eye exposure.
Reference classification	Acute oral toxicity Category 4; serious eye damage Category 1; acute aquatic toxicity Category 1; chronic aquatic toxicity Category 1.
Data limits	The selected full reference identifies harmful oral exposure and serious eye damage, but does not provide numerical acute-toxicity endpoints in its text. No numerical value or absence of chronic effects is invented.

12. Ecological Information

Environmental effects	Classified as very toxic to aquatic life with long-lasting effects. Prevent all uncontrolled releases. The selected reference does not provide numerical ecotoxicity or bioaccumulation endpoints for the supplied grade.
Controls	Prevent uncontrolled release, collect spills and dispose of contaminated material through an authorized route.
Assessment	No product-specific PBT/vPvB assessment is claimed. Absence of data does not establish absence of environmental effects.

13. Disposal Considerations

Product	Collect surplus product and contaminated cleanup material for disposal by an authorized chemical-waste contractor in accordance with local requirements.
Packaging	Containers may retain product residues. Do not reuse contaminated packaging without an approved cleaning process; use an authorized disposal route.

14. Transport Information

Classification	Class 9 — Environmentally hazardous
UN number	UN 3077
Shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Class / packing group	IMDG / IATA: UN 3077, Class 9, packing group III; IMDG marine pollutant. The selected US domestic DOT reference reports not regulated. Apply the mode-specific rules and consignment conditions; do not treat the domestic exception as an international non-dangerous-goods classification.
Transport precautions	Protect packaging and closures from damage, secure loads and prevent releases. This reference is not a shipping declaration for a specific consignment.

15. Regulatory Information

Identity	Zinc Sulfate Monohydrate; CAS 7446-19-7; EC 231-793-3
HS reference	283329; reference heading rather than a destination customs ruling.
Compliance	Apply applicable workplace, environmental and transport rules. A raw-material listing does not establish authorization for a finished formulation.
Assessment	No ZXCHEM-specific chemical safety assessment or destination registration is asserted.

16. Other Information

Hazard meanings	H302: harmful if swallowed. H318: serious eye injury. H400/H410: very high aquatic toxicity with lasting effects.
Limitations	Prepared as reference safety information for the identified material. It is not a batch analytical certificate or safety assessment of a different solvent-containing formulation.
Revision	2026.1; prepared 2026-10-07. Customer-document branding and title corrected; technical safety data retained.
Document scope	Reference safety information for the material and grade described in Sections 1 and 3. Different concentrations, solvents or formulations require the applicable safety information. This is not a batch analytical certificate.

Revision: 2026.1 | Revision date: 2026-10-07