



# NEWAY SINOPHC TECH. LIMITED

ADD:RM. 204, BUILDING 3, NO. 188, AONA RD., CHINA (SHANGHAI) PILOT FREE TRADE ZONE.  
Email:marketing01@newayphc.com; Phone:+86-021-50350029 <https://www.newayphc.com>

## Safety Data Sheet (MSDS)

- **Feed Grade Zinc Sulfate Heptahydrate**(Compliant with GB/T 16483, GHS Rev.9, IMDG, IATA)**Revision Date: 26 FEB 2026**

### SECTION 1: Identification

#### 1.1 Product Identifiers

- Name: Zinc Sulfate Heptahydrate (Feed Grade)
- CAS: 14168-73-1
- Synonyms: White Vitriol; Zinc Sulphate Heptahydrate
- EINECS: 231-793-3

#### 1.2 Supplier Details

- Company: NEWAY SINOPHC TECH. LIMITED
- Address: RM. 204, BLDG 3, 188 Aona Rd, Shanghai FTZ, China
- Tel: +86-021-50350029 | Fax: +86-021-50350029

#### 1.3 Emergency Contact: +86-021-50350029 (24h)

1.4 Uses: **Exclusive for animal feed additive.** Essential trace mineral supplement providing zinc. Promotes growth, immunity, and reproductive performance in livestock and poultry. Not for human food, pharmaceutical or industrial use.

### SECTION 2: Hazards Identification

- **GHS Classification:** Skin irritation (Category 2); Eye irritation (Category 2); Specific target organ toxicity - single exposure (Gastrointestinal tract, Category 3)
- **Pictogram:** (Exclamation Mark)
- **Signal Word:** Warning
- **Hazard Statements:**
  - H315: Causes skin irritation
  - H319: Causes serious eye irritation
  - H335: May cause respiratory irritation
- **Precautionary Statements:**
  - P264: Wash hands thoroughly after handling
  - P280: Wear protective gloves/eye protection
  - P302+P352: If on skin: Wash with plenty of soap and water
  - P305+P351+P338: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Summary:** Non-flammable, water-soluble crystalline solid. Mildly acidic; causes skin and eye irritation upon direct contact. Non-toxic to animals at recommended dietary levels; essential trace element.

### SECTION 3: Composition/Information on Ingredients

- **Pure Substance:** Zinc Sulfate Heptahydrate (CAS 14168-73-1)
- **Concentration:** ≥99.0% (Feed Grade)



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- **Impurities:** Trace amounts of iron and other minerals (compliant with feed hygiene standards)

## SECTION 4: First Aid Measures

- **Inhalation:** Remove the victim to fresh air and keep at rest. If coughing or irritation persists, seek medical advice.
- **Skin Contact:** Immediately flush contaminated skin with plenty of running water for 10-15 minutes. Remove contaminated clothing and shoes. If irritation develops, seek medical attention.
- **Eye Contact:** Hold eyelids open and rinse continuously with clean running water for at least 15 minutes. Remove contact lenses if worn. If eye redness or pain persists, consult an ophthalmologist immediately.
- **Ingestion (Human):** Rinse mouth thoroughly with water. Drink a large amount of water or milk to dilute. Do not induce vomiting. Seek medical attention if gastrointestinal discomfort (nausea, abdominal pain) occurs.
- **Antidote:** No specific antidote. Treat symptomatically.

## SECTION 5: Firefighting Measures

- **Extinguishing Media:** Water spray, carbon dioxide (CO<sub>2</sub>), dry chemical powder, foam. All common agents are suitable.
- **Hazards in Fire:** Non-combustible. Decomposes at high temperatures (>500°C) to produce toxic sulfur oxides (SO<sub>x</sub>). No explosion risk.
- **Firefighter Advice:** Wear self-contained breathing apparatus (SCBA) and full fire-fighting gear if exposed to high-temperature decomposition fumes. Cool surrounding containers with water spray to prevent thermal expansion.

## SECTION 6: Accidental Release Measures

- **Personal Precautions:** Wear N95 dust mask, nitrile gloves and chemical splash goggles. Ensure good ventilation in the spill area.
- **Cleanup Methods:**
  - Small Spill: Sweep into a sealed HDPE container for reuse or disposal. Wipe the area with a damp cloth to prevent dust dispersion and dissolution.
  - Large Spill: Collect with a dust-free vacuum cleaner into sealed drums. Avoid contact with water to prevent formation of acidic solution.
- **Environmental Precautions:** Prevent spilled material from entering drains, sewers or water bodies. Zinc is toxic to aquatic life at high concentrations; contain and recover spills immediately.

## SECTION 7: Handling and Storage

- **Handling Precautions:** Operate in a well-ventilated area with local dust extraction. Avoid generating dust during weighing and mixing. Wash hands thoroughly after handling.
- **Storage Conditions:**
  - Temperature: ≤25°C; Relative Humidity: ≤60%



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- Package: Keep tightly sealed in original moisture-proof PP woven bags or HDPE drums with inner PE liners (prevents efflorescence and caking).
- Shelf Life: **36 months (unopened, under specified conditions)**
- Incompatibilities: Strong bases, strong oxidizing agents, alkaline metals
- Segregation: Store separately from strong bases and non-feed grade chemicals.

### SECTION 8: Exposure Controls/Personal Protection

- **Occupational Exposure Limit (OEL):** Zn: 1 mg/m<sup>3</sup> (TWA, respirable fraction)
- **Engineering Controls:** Local exhaust ventilation systems in bulk handling areas to control dust concentration.
- **Personal Protective Equipment (PPE):**
  - Respiratory: N95 dust mask (for bulk handling only)
  - Eyes: Chemical splash goggles (mandatory for all operations)
  - Skin: Nitrile rubber gloves (mandatory to prevent skin irritation)

### SECTION 9: Physical and Chemical Properties

- **Physical State:** Colorless transparent crystals or white powder | **Odor:** Odorless
- **Melting Point:** Loses water at ~100°C, decomposes >500°C | **Boiling Point:** N/A (decomposes)
- **Solubility:** **Freely soluble in water (96 g/100 mL at 25°C);** insoluble in ethanol
- **Bulk Density:** 1.35-1.45 g/cm<sup>3</sup> | **Flash Point:** Not applicable (non-combustible)
- **Vapor Pressure:** <0.0001 kPa (25°C) | **pH Value:** 4.0-6.0 (5% aqueous solution)

### SECTION 10: Stability and Reactivity

- **Stability:** Chemically stable under normal feed production and storage conditions. Loses water of crystallization upon heating, forming anhydrous zinc sulfate.
- **Hazardous Reactions:** Reacts with strong bases to form insoluble zinc hydroxide. Reacts with strong oxidizing agents at high temperatures to produce toxic fumes.
- **Hazardous Polymerization:** Will not occur.
- **Decomposition Products:** Sulfur dioxide (SO<sub>2</sub>), zinc oxide (ZnO) (high-temperature decomposition).

### SECTION 11: Toxicological Information

- **Acute Toxicity:** Oral (Rat) LD<sub>50</sub> = 2,200 mg/kg (Moderate toxicity); Dermal (Rabbit) LD<sub>50</sub> >5,000 mg/kg
- **Skin Irritation:** Causes mild skin irritation (Category 2) due to acidic nature
- **Eye Irritation:** Causes serious eye irritation (Category 2)
- **Carcinogenicity:** IARC Classification - Group 3 (not classifiable); essential trace element for animals and humans.
- **Animal Safety:** Essential zinc source. Safe at recommended dietary inclusion levels (50-150 ppm). Deficiency causes poor growth, skin lesions and reduced immunity.

### SECTION 12: Ecological Information

- **Aquatic Toxicity:** LC<sub>50</sub> (Zebrafish, 96h) = 12 mg/L (Toxic to aquatic life)



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- **Biodegradability:** Not applicable (inorganic salt)
- **Bioaccumulation Potential:** Moderate (zinc is an essential micronutrient but can accumulate in aquatic organisms)
- **Environmental Impact:** At recommended feed levels, excretion in manure is safe and can improve soil zinc content. Large spills into water bodies are toxic to fish and invertebrates.

### SECTION 13: Disposal Considerations

- **Product Waste:** Expired zinc sulfate is non-hazardous waste. It can be used as a micronutrient fertilizer or disposed of as general solid waste in accordance with local regulations.
- **Packaging Waste:** Rinse packaging thoroughly with water, then recycle or dispose of as non-hazardous waste.
- **Disposal Compliance:** Comply with China General Solid Waste Pollution Control Law and local environmental regulations.

### SECTION 14: Transport Information

- **UN Number:** None (Non-hazardous goods for transport)
- **UN Proper Shipping Name:** Zinc Sulfate Heptahydrate (Feed Additive), Not Dangerous Goods
- **Hazard Class:** None | **Packaging Group:** None | **Environmental Hazard:** No
- **Transport Precautions:** Transport in covered, dry ordinary cargo vehicles. Prevent moisture absorption (caking), package damage and dust dispersion. Avoid mixing with strong bases during transport.

### SECTION 15: Regulatory Information

- **China:** Compliant with GB 13078.1-2017 and GB/T 21696-2008 (National Standard for Zinc Sulfate).
- **EU:** Compliant with EC 1831/2003 (Feed Additives), REACH registered (not in SVHC List).
- **US:** TSCA listed, approved by FDA/CVM for use in animal feed (21 CFR Part 573).
- **International:** Meets Codex Alimentarius Commission standards for trace mineral feed additives.

### SECTION 16: Other Information

- **Disclaimer:** This MSDS is for feed grade zinc sulfate heptahydrate only. Misuse for non-feed purposes is at the user's sole risk. The supplier is not liable for damages resulting from improper handling or disposal.
- **Revision Date:** 26 FEB 2026