

Section 1. Product and Company Identification

Product Name Zinc Formaldehyde Sulfoxylate
CAS Number 24887-06-7

Parchem - fine & specialty chemicals

415 Huguenot Street

New Rochelle, NY 10801

(914) 654-6800 (914) 654-6899

parchem.com

info@parchem.com

EMERGENCY RESPONSE NUMBER
CHEMTEL

Toll Free US & Canada: 1 (800) 255-3924

All other Origins: 1 (813) 248-0585

Collect Calls Accepted

Section 2. Hazards Identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Acute oral toxicity cat. 4 H302

Eye irritation, cat. 2A H319

Aquatic acute. 2 H401

OSHA GHS Classification

This product is classified as hazardous as defined within the GHS OSHA Hazard Communication Standard 29CFR1910.1200.

GHS Label Elements

Pictograms:



Signal word: WARNING

Hazard and precautionary statements

Hazard Statements

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

H401 Toxic to aquatic life.

Precautionary Statements

P264 Wash thoroughly after handling.

P270 Do not eat, drink, or smoke when using this product.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.



P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
P330 Rinse mouth.
P305 + P351 + P338 IF IN EYES: Rinse continuously with water for several minutes.
Remove contact lenses if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical attention.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3. Composition / Information on Ingredients

Common Name Zinc Formaldehyde Sulfoxylate
CAS Number 24887-06-7

COMPONENT	CAS NUMBER	CONCENTRATION
Zinc Formaldehyde Sulfoxylate	24887-06-7	> 95%
Zinc Sulfite	13597-44-9	< 3.5%

Section 4. First Aid Measures

Description of first-aid measures

Skin contact: Wash immediately with plenty of soap and water for at least 15 minutes being careful to rinse under eyelids as well; get medical attention if irritation develops.

Eye contact: Flush eyes immediately with plenty of water for at least 15 minutes being careful to rinse under eyelids as well; get medical attention.

Ingestion: Do not induce vomiting unless at direction of physician; give several glasses of water or milk to drink immediately. Get medical attention immediately.

Inhalation: Move person to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed: Harmful if swallowed; serious eye irritation.

Indication of any immediate medical attention and special treatment needed: Eye wash stations and emergency showers should be available.

Section 5. Firefighting Measures

Extinguishing media: Water spray, foam, dry chemical. (Carbon dioxide is unsuitable as the chemical has its own oxygen supply.)

Special hazards arising from the substance or mixture: May generate heat when wet. Combustion products may include but are not limited to: carbon monoxide, carbon dioxide, sulfur dioxide, some metallic oxides, formaldehyde fumes. The product may contain fine dusts capable of forming explosive dust/air mixtures.

Advice for firefighters: Use protective firefighting clothing and positive pressure self-contained breathing apparatus to protect against potential harmful and/or irritating fumes. Do not use high pressure water jet which may cause dusting. Prevent fire runoff water from entering sewer drains.



Section 6. Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures: Isolate area; use appropriate personal protection equipment; keep unnecessary and unprotected personnel from entering the involved area.

Environmental precautions: Prevent contamination of soil and water. Contain contaminated firefighting waters.

Methods and material for containment and cleaning up: Mix waste material together with dust-binding material and collect into appropriate disposal container; dispose of in accordance with applicable local and federal environmental control laws and regulations.

Reference to other sections: For more information on exposure controls, personal protection and disposal, review data in section 8 and section 13 of this SDS.

Section 7. Handling and Storage

Precautions for safe handling: Avoid contact with eyes, skin and clothing; wash thoroughly after handling. Use with adequate ventilation; avoid dust formation. Avoid breathing dust. Do not expose to excessive heat. Handle in accordance with good industrial hygiene and safe work practices.

Conditions for safe storage, including any incompatibilities: Store in a cool, dry place with adequate ventilation. Keep container tightly closed; protect from moisture. Recommended storage temperature: 15 - 35°C (59 - 95°F).

Section 8. Exposure Controls / Personal Protection

Control parameters

Occupational exposure limits: None established; recommend treating as a nuisance dust: Particulates not otherwise regulated; OSHA PEL: 15 mg/m³ (total dust); 5 mg/m³ (respirable fraction).

Recommended monitoring procedures: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference can be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents for the determination of hazardous substances.

Exposure Controls: Follow good industrial workplace practices; do not eat, drink or smoke while handling; wash hands before breaks and at end of workshift; follow recommendations in this SDS.

Appropriate engineering controls: Ensure adequate ventilation through local exhaust.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields or chemical safety goggles. Refer to OSHA 29CFR1910.133 and European Standard EN166.

Skin protection

Wear suitable protective clothing as necessary to minimize skin contact. Refer to OSHA 29CFR1910.132 and 1910.136 for OSHA approved standards on protective clothing and footwear.

Respiratory protection Respiratory protection is not required under normal conditions of use. Where protection from nuisance levels of dusts is desired a NIOSH approved dust mask may be used, e.g., particle filter with medium efficiency for solid particles (EN143 or 149, Type P2 or FFP2). Respirator use should follow the guidelines of an established respiratory protection program in compliance with 29CFR1910.134 (also see Canadian CSA Standard Z94.4-93, European Standard CR 529). If hazard assessment indicates that processing temperatures may cause the release of formaldehyde, wear respiratory protection suitable for formaldehyde exposure

Hand protection: Wear nitrile rubber or other suitable protective gloves; refer to European Standard EN374. Some options include: nitrile rubber (0.4 mm coating thickness); butyl rubber (0.7 mm coating thickness). Gloves selected should have a breakthrough rating of at least > 30 minutes.

Other Protective Equipment: The type and degree of personal protective equipment appropriate will depend on the specific work operation.

Environmental exposure controls: Emissions from process and ventilation equipment should be monitored to ensure compliance with all applicable environmental control regulations.

Section 9. Physical and Chemical Properties

Information on basic physical and chemical properties

General information

Appearance: Powder

Color: White

Type of Odor: Slight, characteristic

Odor Threshold: Not applicable

Boiling Point: Not applicable

Melting Point: ~150°C (~302°F) (decomposes)

Flammability Classification: Not flammable; combustible if involved in a fire; not self-igniting.

Flash Point: No data available

Ignition Temperature: No data available

Decomposition Temperature: ~150°C (~302°F)

Flammability Limits (lower/upper): No data available

Vapor Pressure: Not applicable

Vapor Density (Air=1): No data available

Evaporation Rate (BuAc=1): Not applicable

Octanol/Water Partition Coefficient (log Pow): No data available

Specific Gravity: 2.27

Bulk Density: No data available

Water Solubility (20°C): 500 g/l
pH: 3.5 - 5.2 (10% aqueous solution)
Viscosity: Not applicable
Explosive Properties: No data available
Oxidizing Properties: No data available
Molecular Formula: C₂H₆O₆S₂Zn
Molecular Weight: 255.57

Section 10. Stability and Reactivity

Stability and Reactivity

Reactivity: Not inherently chemically reactive.
Stability: Stable under recommended storage conditions (unstable in bulk liquid form >70°C).
Possibility of hazardous reactions: ZFS reacts with acids to release sulfur dioxide.
Conditions to avoid: Avoid exposure to air or moisture over prolonged periods. Avoid dust generation. Avoid exposure to temperatures in excess of 50°C (122°F).
Incompatible materials: Strong oxidizing agents, acids.
Hazardous decomposition products: Combustion products include but are not limited to carbon monoxide, carbon dioxide, sulfur dioxide, metallic oxides, possible release of formaldehyde.

Section 11. Toxicological Information

Information on toxicological effects

Acute Oral Toxicity: LD50 (rat): 1280 mg/kg
Acute Dermal Toxicity: No data available
Inhalation Toxicity: No data available
Skin Corrosion/irritation (rabbit): Non-irritating
Serious Eye Damage/Eye Irritation (rabbit): Non-irritating
Respiratory or Skin Sensitization: Non-sensitizing
Germ Cell Mutagenicity: No data available
Carcinogenicity: Not listed by OSHA/NTP/IARC.
Reproductive Toxicity: No data available.
Specific Target Organ Toxicity - single exposure (STOT-se): No data available
Specific Target Organ Toxicity - repeated exposure (STOT-re): No data available
Aspiration Hazard: Not applicable

Potential Health Effects

Skin Contact: Not expected to be irritating; prolonged or repeated contact may cause irritation.
Eye Contact: Dusts may cause mechanical irritation of the eye.
Ingestion: Harmful if swallowed; may cause gastrointestinal irritation with nausea, vomiting, diarrhea.
Inhalation: Dusts may cause respiratory tract irritation.
Chronic Health Effects: No data available



Additional Data: No data.

Section 12. Ecological Information

Toxicity

Acute/prolonged toxicity to fish: No data available

Acute/prolonged toxicity to aquatic invertebrates: EC50 (Daphnia magna)(24-hr): 12 mg/l

Acute/prolonged toxicity to aquatic plants: EC50 (Algae)(72-hr): >100 mg/l

Toxicity to bacteria, to soil dwelling organisms and to terrestrial plants: Inhibition of the degradation activity of activated sludge is not anticipated during the correct introduction of appropriate low concentrations into biological treatment systems.

DEV-L2: >100 mg/l

COD = 405 mg/g

Chronic toxicity to aquatic organisms: No data available

General effect: Toxic to aquatic life.

Persistence and degradability: Inherently biodegradable (> 70% elimination at 28 days)

Bioaccumulative potential: No data available

Mobility in soil: No data available.

Results of PBT and vPvB assessment (EC reg. 453/2010): No data available

German WGK classification: WGK = 2 (self-assessment)

Other adverse effects: No other adverse effects are identified.

Additional information: No data available

Section 13. Disposal Considerations

Waste Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

DOT: Not regulated as hazardous for transport

ADR-RID: Not regulated as hazardous for transport

IMDG: Not regulated as hazardous for transport

IATA: Not regulated as hazardous for transport

Section 15. Regulatory Information

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

SARA Title III Section 311/312 (40CFR370): Acute health hazard

SARA Title III Section 313 (40CFR372): Product contains approx. 100% zinc compound. (23% zinc calculated as Zn).



CERCLA Status (40 CFR 302): No Reportable Quantity components

TSCA Inventory Status: Reported/included

Canadian WHMIS Classification: D2B

Chemicals known to the State of California to Cause Cancer or Reproductive

Toxicity: None known to be in the product at levels requiring a warning.

REACH Annex XIV (SVHC): No listed components

REACH Annex XVII (Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles)

No listed components

REACH registration/pre-registration: This material has been registered, pre-registered or is otherwise exempted from registration under the Registration, Evaluation and Authorization of Chemical Substances.

Chemical safety assessment: No data available

HMIS Rating

Health: 1

Flammability: 1

Reactivity: 0

Section 16. Other Information

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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