

Chemical Safety Data Sheet

Section 1 IDENTIFICATION

GHS Product identifier: Zinc chloride.

Other means of identification: anhydrous zinc chloride.

Recommended use of the chemical and restrictions on use: /

Supplier's details: WEIFANG HENGFENG CHEMICAL CL.,LTD.

Emergency phone number: /

Section 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture:

Acute toxicity, oral Category 4, Skin corrosion/irritation Category 1C, Serious eye damage/eye irritation Category 1, Hazardous to the aquatic environment (acute) Category 1, Hazardous to the aquatic environment (chronic) Category 1

GHS Label elements, including precautionary statements:



Signal word: Danger

Hazard statement(s): Harmful if swallowed. Causes severe skin burns and eye damage. Very toxic to aquatic life with long lasting effects.

Precautionary statement(s):

Prevention: Do not breathe dusts or mists. 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: Call a poison center/doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor. Specific treatment (see Safety Data Sheet). 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. Collect spillage.

Storage: Store locked up.

Disposal: Dispose of contents/container to...

Other hazards which do not result in classification: /

Section 3 COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS No. | Concentration% |
|---------------|-----------|----------------|
| Zinc chloride | 7646-85-7 | 98.62% |

Section 4 FIRST AID MEASURES

Description of necessary first aid measures

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact: Wash off with soap and plenty of water. Consult a physician.

In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed: If swallowed do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed: /

Indication of immediate medical attention and special treatment needed: For acute or short term repeated exposures to strong acids: Airway problems may arise from laryngeal edema and inhalation exposure. Treat with 100% oxygen initially. Respiratory distress may require cricothyroidotomy if endotracheal intubation is contraindicated by excessive swelling. INGESTION: Immediate dilution (milk or water) within 30 minutes post ingestion is recommended. DO NOT attempt to neutralise the acid since exothermic reaction may extend the corrosive injury. SKIN: Skin lesions require copious saline irrigation. Treat chemical burns as thermal burns with non-adherent gauze and wrapping. EYE: Eye injuries require retraction of the eyelids to ensure thorough irrigation of the conjunctival cul-de-sacs. Irrigation should last at least 20-30 minutes. DO NOT use neutralising agents or any other additives. Several litres of saline are required.

Section 5 FIREFIGHTING MEASURES

Suitable extinguishing media: dry chemical, carbon dioxide, sands.

Special hazards arising from the chemical: Non combustible. Not considered to be a significant fire risk. Acids may react with metals to produce hydrogen, a highly flammable and explosive gas.

Special protective actions for fire-fighters: Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Use fire fighting procedures suitable for surrounding area. Do not approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire.

Section 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Remove all ignition sources. Clean up all spills immediately. Avoid contact with skin and eyes. Control personal contact with the substance, by using protective equipment.

Environmental precautions: Prevent, by any means available, spillage from entering drains or water course.

Methods and materials for containment and cleaning up: Contain spill with sand, earth or vermiculite. Collect recoverable product into labelled containers for recycling. Neutralise/decontaminate residue. Collect solid residues and seal in labelled drums for disposal. Wash area and prevent runoff into drains.

Section 7 HANDLING AND STORAGE

Precautions for safe handling: Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. **WARNING:** To avoid violent reaction, ALWAYS add material to water and NEVER water to material. Avoid smoking, naked lights or ignition sources. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. Keep containers securely sealed when not in use.

Avoid physical damage to containers.

Conditions for safe storage, including any incompatibilities: Store in original containers. Keep containers securely sealed. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storage and handling recommendations contained within this MSDS.

Section 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

OCCUPATIONAL EXPOSURE LIMITS (OEL)

| Source | Ingredient | Material name | TWA | STEL |
|--|---------------|--------------------|------------------------|------------------------|
| Occupational exposure limits for hazardous agents in the workplace | zinc chloride | Zinc chloride fume | 1 (mg/m ³) | 2 (mg/m ³) |

EMERGENCY LIMITS

| Ingredient | TEEL-0 | TEEL-1 | TEEL-2 | TEEL-3 |
|---------------|-----------|-----------|---------|---------|
| zinc chloride | 2.08(ppm) | 4.17(ppm) | 40(ppm) | 40(ppm) |

| Ingredient | Original IDLH | Revised IDLH |
|---------------|---------------|--------------|
| zinc chloride | 4,800(mgm3) | 50(mgm3) |

Appropriate engineering controls: Local exhaust ventilation is required where solids are handled as powders or crystals. If in spite of local exhaust an adverse concentration of the substance in air could occur, respiratory protection should be considered.

Individual protection measures

Eye/face protection: Chemical goggles. Full face shield may be required for supplementary but never for primary protection of eyes; these afford face protection. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants.

Skin protection: Wear chemical protective gloves, e.g. PVC. Wear safety footwear or safety gumboots, e.g. Rubber. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly.

Respiratory protection: Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant.

Thermal hazards: /

Section 9 PHYSICAL AND CHEMICAL PROPERTIES

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| Appearance (physical state, colour etc) | White powder |
| Odour | / |
| Odour Threshold | / |
| pH | / |
| Melting point/freezing point | / |
| Initial boiling point and boiling range | 290°C |
| Flash point | 732°C |
| Evaporation rate | / |
| Flammability (solid, gas) | / |
| Upper/lower flammability or explosive limits | / |
| Vapour pressure | / |
| Vapour density | / |
| Relative density | 2.91 |
| Solubility(ies) | Miscible |
| Partition coefficient: n-octanol/water | / |
| Auto-ignition temperature | / |
| Decomposition temperature | / |
| Viscosity | / |

Section 10 STABILITY AND REACTIVITY

Reactivity: /

Chemical stability: The material is stable in normal temperature.

Possibility of hazardous reactions: Contact with alkaline material liberates heat. Inorganic acids react with active metals, including such structural metals as aluminum and iron, to release hydrogen, a flammable gas. Inorganic acids can initiate the polymerisation of certain classes of organic compounds.

Conditions to avoid: Moisture.

Incompatible materials: alkalis and active metals.

Hazardous decomposition products: hydrogen chloride, metal oxides.

Section 11 TOXICOLOGICAL INFORMATION

Information on the likely routes of exposure: Inhaled, swallowed, skin, eyes.

Symptoms related to the physical, chemical and toxicological characteristics: /

Acute health effects: Acidic corrosives produce respiratory tract irritation with coughing, choking and mucous membrane damage. Symptoms of exposure may include dizziness, headache, nausea and weakness. Accidental ingestion of the material may be harmful. The material can produce chemical burns following direct contact with the skin. The material can produce chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating.

Chronic health effects: Practical evidence shows that inhalation of the material is capable of inducing a sensitisation reaction in a substantial number of individuals at a greater frequency than would be expected from the response of a normal population. Practical experience shows that skin contact with the material is capable either of inducing a sensitisation reaction in a substantial number of individuals, and/or of producing a positive response in experimental animals.

Numerical measures of toxicity(such as acute toxicity estimates): Oral (rat) LD50: 350 mg/kg,

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| Inhalation (human) TClO: 4800 mg/m ³ /3h. |
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Section 12 ECOLOGICAL INFORMATION

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| Toxicity: Very toxic to aquatic life with long lasting effects. |
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| Persistence and degradability: / |
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| Bioaccumulative potential: / |
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| Mobility in soil: / |
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| Other adverse effects: / |
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Section 13 DISPOSAL CONSIDERATIONS

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| Disposal methods: Recycle wherever possible. Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified. Treat and neutralise at an approved treatment plant. Treatment should involve: Mixing or slurring in water; Neutralisation with soda-lime or soda-ash followed by: burial in a land-fill specifically licenced to accept chemical and / or pharmaceutical wastes or Incineration in a licenced apparatus (after admixture with suitable combustible material). Decontaminate empty containers with 5% aqueous sodium hydroxide or soda ash, followed by water. Observe all label safeguards until containers are cleaned and destroyed. |
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Section 14 TRANSPORT INFORMATION

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| UN number: 2331. |
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| UN proper shipping name: ZINC CHLORIDE, ANHYDROUS. |
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| Transport hazard class(es) : 8. |
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| Packing group, if applicable: III. |
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| Environmental hazards: Marine pollutant. |
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| Special precautions for user: / |
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Section 15 REGULATORY INFORMATION

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| Regulations: This safety data sheet is in compliance with the following national standards: GB 16483-2008, GB 13690-2009, GB/T 15098-2008, GB 18218-2009, GB 15258-2009, GB 6944-2012, GB 190-2009, GB 191-2009, GB 12268-2008, GA 57-1993, GBZ 2-2007 as well as the following national regulations: Dangerous Goods Transport Administrative Regulation [Published by the Ministry of Railways, 2008], Dangerous Chemicals Safety Administrative Regulation [Published by the State Council, 2011]. |
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Section 16 OTHER INFORMATION

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| References | UN Recommendations on the Transport of Dangerous Goods Model Regulations UN Globally Harmonized System of Classification and Labelling of Chemicals |
| Form Date | 24-April-2017 |

Note 1: When products contain two or more hazardous substances, Safety Data Sheets should be prepared based on the risk of the mixture.

Note 2: Manufacturer / supplier should ensure the correctness of the information contained in the safety data sheets, and updated in a timely manner.

Note 3: As a result of product features without the existence of certain information or no data available (such as boiling point does not exist for the solid) in the table with "/" logo.