

Material Safety Data Sheet

Zinc Chloride

Section 1 - Chemical Product and Company Identification

MSDS Name: Zinc Chloride

Synonyms: Zinc Butter, Zinc Dichloride

Company Identification:

Hangzhou Xiaoshan Jiangcheng Chemical Co.

Address: Nanyang Economic Zone, Zhejiang P.R.China

Contact person: Mr Chen Lei

For information, call: +86-571-82890300

Emergency Number: +86-571-88390311

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
7646-85-7	Zinc chloride	100	231-592-0

Hazard Symbols: C N

Risk Phrases: 34 50/53

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: white. **Danger!** Corrosive. Contact with skin causes irritation and possible burns, especially if the skin is wet or moist. Harmful if swallowed. May cause reproductive and fetal effects. Inhalation of fumes may cause metal-fume fever. May cause severe respiratory and digestive tract irritation with possible burns. Toxic. Causes severe eye irritation and possible injury.

Target Organs: Kidneys, pancreas.

Potential Health Effects

Eye: May cause irreversible eye injury. Contact with eyes may cause severe irritation, and possible eye burns.

Skin: Contact with skin causes irritation and possible burns, especially if the skin is wet or moist.

Ingestion: Harmful if swallowed. Causes severe digestive tract burns with abdominal pain, vomiting, and possible death. May cause corrosion and permanent tissue destruction of the esophagus and digestive tract. In the Pancreas, may cause elevated glucose and amylase levels while depressing the calcium level.

Inhalation: May cause cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood). May cause severe irritation of the respiratory tract with sore throat, coughing, shortness of breath and delayed lung edema. Inhalation of fumes may cause metal fume fever, which is characterized by flu-like symptoms with metallic taste, fever, chills, cough, weakness, chest pain, muscle pain and increased white blood cell count.

Chronic: Prolonged or repeated skin contact may cause defatting and dermatitis. May cause reproductive and fetal effects.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately. Do NOT allow victim to rub or keep eyes closed.

Skin: Get medical aid immediately. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Destroy contaminated shoes.

Ingestion: Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation.

Notes to Physician: Effects may be delayed. Administration of Calcium Disodium EDTA may be useful in acute poisoning with its use at the discretion of qualified medical personnel.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Substance is

noncombustible. Containers may explode in the heat of a fire. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Contact with metals may evolve flammable hydrogen gas.

Extinguishing Media: Use extinguishing media most appropriate for the surrounding fire. Do NOT get water inside containers. For small fires, use dry chemical, carbon dioxide, or water spray. For large fires, use dry chemical, carbon dioxide, alcohol-resistant foam, or water spray. Cool containers with flooding quantities of water until well after fire is out.

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Avoid runoff into storm sewers and ditches which lead to waterways. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Avoid generating dusty conditions. Remove all sources of ignition. Do not get water inside containers.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Discard contaminated shoes.

Storage: Store in a cool, dry place. Keep away from water. Corrosives area. Do not store in metal containers. Keep containers tightly closed.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Zinc chloride	1 mg/m ³ TWA; 2 mg/m ³ STEL	1 mg/m ³ TWA 50 mg/m ³ IDLH	1 mg/m ³ TWA (fume)

OSHA Vacated PELs: Zinc chloride: 1 mg/m³ TWA; 2 mg/m³ STEL

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure. Wear an impervious apron.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Appearance: white

Odor: none reported

pH: Not available.

Vapor Pressure: .00128 atm @ 42

Vapor Density: 4.7

Evaporation Rate: Not applicable.

Viscosity: Not applicable.

Boiling Point: 732 deg C

Freezing/Melting Point: 293 deg C

Autoignition Temperature: Not applicable.

Flash Point: Not applicable.

Decomposition Temperature: Not available.

NFPA Rating: (estimated) Health: 3; Flammability: 0; Reactivity: 0

Explosion Limits, Lower: Not available.

Upper: Not available.

Solubility: Soluble in water.

Specific Gravity/Density: 2.91

Molecular Formula: $ZnCl_2$

Molecular Weight: 136.286

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials, moisture, metals, excess heat.

Incompatibilities with Other Materials: Strong oxidizing agents, moisture, cyanides, sulfides, potassium.

Hazardous Decomposition Products: Hydrogen chloride, chlorine, irritating and toxic fumes

and gases, toxic fumes of zinc oxide.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:

CAS# 7646-85-7: ZH1400000

LD50/LC50:

CAS# 7646-85-7:

Oral, mouse: LD50 = 329 mg/kg;

Oral, rat: LD50 = 350 mg/kg;<BR.

Carcinogenicity:

CAS# 7646-85-7: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Epidemiology: No information available.

Teratogenicity: Zinc oxide has been observed to cause morphological transformation in hamster embryos. It has also been observed to cause stunted growth and other developmental abnormalities.

Reproductive Effects: Has been observed to cause paternal reproductive effects in rats.

Neurotoxicity: No information available.

Mutagenicity: There is evidence that zinc chloride is a mutagen in humans.

Other Studies: No data available.

Section 12 - Ecological Information

Ecotoxicity: No data available. No information available.

Environmental: No information available.

Physical: No information available.

Other: May be toxic to aquatic organisms; May cause long-term adverse effects in the aquatic environment.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	IATA	RID/ADR	IMO	Canada TDG
Shipping Name:	ZINC CHLORIDE, ANHYDROUS				ZINC CHLORIDE
Hazard Class:	8				8(9.2)
UN Number:	UN2331				UN2331
Packing Group:	III				III

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 7646-85-7 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

SARA

Section 302 (RQ)

CAS# 7646-85-7: final RQ = 1000 pounds (454 kg)

Section 302 (TPQ)

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 7646-85-7: acute.

Section 313

This material contains Zinc chloride (listed as ** undefined **), 100%, (CAS# 7646-85-7) which

is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

CAS# 7646-85-7 is listed as a Hazardous Substance under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 7646-85-7 can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

C N

Risk Phrases:

R 34 Causes burns.

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

Safety Phrases:

S 28 After contact with skin, wash immediately with...

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 7/8 Keep container tightly closed and dry.

S 60 This material and/or its container must be disposed of as hazardous waste.

S 61 Avoid release to the environment. Refer to special instructions/Safety data sheets.

WGK (Water Danger/Protection)

CAS# 7646-85-7: 1

Canada

CAS# 7646-85-7 is listed on Canada's DSL List. CAS# 7646-85-7 is listed on Canada's DSL List.

This product has a WHMIS classification of D1B, E.

CAS# 7646-85-7 is listed on Canada's Ingredient Disclosure List.

Exposure Limits

CAS# 7646-85-7: OEL-ARAB Republic of Egypt:TWA 1 mg/m3 (fume) OEL-A

AUSTRALIA:TWA 1 mg/m³;STEL 2 mg/m³ (fume) OEL-BELGIUM:TWA 1 mg/m³;STEL 2 mg/m³ (fume) OEL-DENMARK:TWA 0.5 mg/m³ (fume) OEL-FINLAND:TWA 1 mg/m³ (fume) OEL-FRANCE:TWA 1 mg/m³ (fume) OEL-THE NETHERLANDS:TWA 1 mg/m³ (fume) OEL-THE PHILIPPINES:TWA 1 mg/m³ (fume) OEL-SWEDEN:TWA 1 mg/m³ (fume) OEL-SWITZERLAND:TWA 1 mg/m³ (fume) OEL-THAILAND:TWA 1 mg/m³ (fume) OEL-TURKEY:TWA 1 mg/m³ (fume) OEL-UNITED KINGDOM:TWA 1 mg/m³;STEL 2 mg/m³ (fume) OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

Section 16 - Additional Information

MSDS Creation Date: 2/19/1998

Revision #3 Date: 10/06/2000

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