

ZACLON LLC

MATERIAL SAFETY DATA SHEET

IDENTIFICATION

NAME	Zinc Chloride - Granular
GRADE	Technical
CHEMICAL FAMILY	Metal Halide
SYNONYMS	Butter of Zinc
FORMULA	ZnCl ₂
CAS NAME	Zinc Chloride
CAS REGISTRY NO.	7646-85-7
I.D. NOS./CODES	NIOSH Registry No: 2H 1400000
MANUFACTURER/DISTRIBUTOR	Zaclon LLC
PRODUCT INFORMATION PHONE	(800) 356-7327
TRANSPORTATION EMERGENCY PHONE	CHEMTREC (800) 424-9300
ADDRESS	SARA/TITLE III STATUS
2981 Independence Road	See ADDITIONAL INFORMATION and
Cleveland, Ohio 44115	HAZARDOUS COMP. Section Pg. 2

PHYSICAL DATA

BOILING POINT , 760 MM Hg 730 °C (1346 °F)	MELTING POINT 290 °C (554 °F)
SPECIFIC GRAVITY 2.9	VAPOR PRESSURE Nil
VAPOR DENSITY Not Applicable.	SOLUBILITY IN WATER 81% at 25 °C (77 °F)
pH INFORMATION 1.8 (50% Solution)	EVAPORATION RATE (BUTYL ACETATE=1) 0
FORM Solid	APPEARANCE Granular
COLOR White to Off-White	ODOR Odorless

<p>The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.</p>

HAZARDOUS COMPONENTS

<u>MATERIAL(S)</u>	<u>CAS NO.</u>	<u>APPROXIMATE %</u>
Zinc Chloride*	7646-85-7	97
Ammonium Chloride**	12125-02-9	2

* Regulated as a Toxic Chemical under Section 313 of Title III/SARA, and 40 CFR Part 372.

** Ammonium Salts Generate Ammonia in Water. For SARA 313 Requirements, 10% of the Total ammonia present in aqueous ammonia solutions is reportable.

HAZARDOUS REACTIVITY

INSTABILITY	Stable
INCOMPATIBILITY	Incompatible with cyanides (may release toxic HCN gas) and sulfides (may release toxic H ₂ S gas).
DECOMPOSITION	Will not occur except at high temperatures.
POLYMERIZATION	Will not occur.

FIRE AND EXPLOSION DATA

FLASH POINT	Will not burn.	FLAMMABLE LIMITS IN AIR % BY VOL.
		LOWER Not applicable.
AUTOIGNITION TEMPERATURE	Not available.	UPPER Not applicable.
FIRE AND EXPLOSION HAZARDS	May release zinc oxide fumes, zinc chloride fumes, and hydrogen chloride gas in a fire.	
EXTINGUISHING MEDIA	As appropriate for combustibles in area.	
SPECIAL FIRE FIGHTING INSTRUCTIONS	None.	

HEALTH HAZARD INFORMATION

PRINCIPAL HEALTH HAZARDS (Including Significant Routes, Effects, Symptoms of Over-Exposure, and Medical Conditions Aggravated by Exposure)

Causes skin and eye burns. Fumes, dust, or mist may cause injury to the respiratory tract. Severe exposure may cause lung damage.

Inhalation 10 minute LC50 for zinc chloride: 2000 MG/M³ in rats.
Oral LD50 for zinc chloride: 1100 mg/kg in rats.

The compound in either solid or solution form, is corrosive to the eyes and skin. Toxic effects described in animals from short exposure include corrosion of mucosal surfaces, liver effects, and kidney effects. Toxic effects in animals occurring only with inhalation exposures, are lower respiratory irritation with pulmonary edema. Tests in bacterial or mammalian cell cultures demonstrate mutagenic activity. Tests in some animals indicate that the compound may have embryotoxic activity.

Human health effects of overexposure may initially include: eye irritation with discomfort, tearing, or blurring of vision; skin irritation with discomfort or rash; or irritation of the upper respiratory passages. Higher exposures may lead to these effects: skin burns or ulceration; eye irritation with discomfort, tearing, or blurring of vision; temporary lung irritation effects with cough, discomfort, difficulty breathing, or shortness of breath; possibly modest initial symptoms, followed in hours by severe shortness of breath, requiring prompt medical attention; or fatality from gross overexposure by fume

inhalation or by significant ingestion. There are inconclusive or unverified reports of human sensitization. Individuals with preexisting diseases of the lungs may have increased susceptibility to the toxicity of excessive exposures.

CARCINOGENICITY

Not listed as a carcinogen by IARC, NTP, OSHA, or ACGIH.

EXPOSURE LIMITS [PEL (OSHA), TLV (ACGIH), ETC.]

The OSHA 8-hour Time Weighted Average (TWA) and ACGIH TLV®-TWA for zinc chloride are 1 mg/m³ (as fume).

SAFETY PRECAUTIONS

Do not get in eyes, on skin, on clothing.

Avoid breathing fumes, dust, or mist.

Wash thoroughly after handling.

FIRST AID

In case of contact: Flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician. Wash clothing before reuse and discard shoes.

If inhaled: Remove to fresh air immediately. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician.

If swallowed: Do not induce vomiting. Give large quantities of water or milk. Call a physician. Never give anything by mouth to an unconscious person.

PROTECTION INFORMATION

GENERALLY APPLICABLE CONTROL MEASURES

Good general ventilation should be provided to keep concentrations below the exposure limit.

PERSONAL PROTECTIVE EQUIPMENT

Coverall chemical splash goggles and rubber gloves. Where contact with concentrated zinc chloride is likely, a full-length face shield, rubber apron, pants, jacket, and shoes may be desirable.

DISPOSAL INFORMATION

SPILL, LEAK OR RELEASE Sweep up spillage. Flush spill area with plenty of water to an approved chemical sewer. Comply with Federal, State, and local regulations on reporting releases.

WASTE DISPOSAL Comply with Federal, State, and local regulations. If approved, may be transferred to a licensed contractor, or flushed to sewer to waste treatment system.

SHIPPING INFORMATION

DOT/IMO

PROPER SHIPPING NAME

Zinc Chloride, Anhydrous

HAZARD CLASS

8, Corrosive Material

I.D. NUMBER UN NO. 2331
PACKING GROUP: PG III
REPORTABLE QUANTITY 1,000 Lbs.

SHIPPING CONTAINERS 55 gallon (440 lb.) steel drums with liners and 55 pound poly bags.

STORAGE CONDITIONS: Keep containers tightly closed. Use only dry, clean utensils in handling. Store in a warm, 10-24 °C (50-75 °F), dry place out of direct sunlight.

NPCA-HMIS RATINGS

Health 2
Flammability 0
Reactivity 1
Personal Protection **

**Personal protection rating to be supplied by the user depending on use conditions.

TITLE III HAZARD CLASSIFICATION:

Acute Yes
Chronic No
Fire No
Reactivity Yes
Pressure No

ADDITIONAL INFORMATION AND REFERENCES

For further information see Zaclon "Zinc Chloride" Data Sheet.

DATE OF LATEST REVISION/REVIEW: May, 2008
PERSON RESPONSIBLE FOR MSDS: J.L. Curry
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