

# ZACLON LLC MATERIAL SAFETY DATA SHEET

## IDENTIFICATION

<b>NAME</b>	Zinc Chloride - Solution	
<b>GRADES</b>	Crude Grade	
<b>SYNONYMS</b>	Galvanizers' Strip Acid	
<b>CHEMICAL FAMILY</b>	Metal Salt Solution	
<b>CAS NAME</b>	Zinc Chloride, Solution	
<b>FORMULA</b>	ZnCl <sub>2</sub> (in water)	
<b>CAS REGISTRY NO.</b>	7646-85-7	
<b>I.D. NOS./CODES</b>	NIOSH Registry No: 2H 1404000	
<b>MANUFACTURER/DISTRIBUTOR</b>	Zaclon LLC	<b>TRANSPORTATION EMERGENCY PHONE</b> CHEMTREC (800) 424-9300
<b>ADDRESS</b>	2981 Independence Road Cleveland, Ohio 44115	<b>PRODUCT INFORMATION PHONE</b> (800) 356-7327

## PHYSICAL DATA

<b>SPECIFIC GRAVITY</b>	1.2609 to 1.7059
<b>pH</b>	<1.0
<b>EVAPORATION RATE</b> (BUTYL ACETATE=1)	>1 to <1
<b>BOILING POINT (760 mm Hg)</b>	120 to 160 °C (248 to 318 °F)
<b>MELTING POINT</b>	Not applicable
<b>VAPOR PRESSURE</b>	Not determined.
<b>VAPOR DENSITY (Air = 1)</b>	1-2
<b>SOLUBILITY IN WATER</b>	100%
<b>FORM</b>	<b>APPEARANCE</b>
Liquid	Hazy
<b>COLOR</b>	<b>ODOR</b>
Yellow, straw or green	HCl-like, irritating odor

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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.

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**HAZARDOUS COMPONENTS**

<b>MATERIAL(S)</b>	<b>CAS NO.</b>	<b>APPROXIMATE %</b>
Zinc Chloride*	7646-85-7	15 to 60
Ferrous Chloride	65996-67-0	0.5 to 8%
Ammonium Chloride**	12125-02-9	<5%

\* 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.

**NONHAZARDOUS COMPONENTS**

Water	7732-18-5	27 to 85%
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**HAZARDOUS REACTIVITY**

<b>INSTABILITY</b>	Stable
<b>INCOMPATIBILITY</b>	Incompatible with cyanides (may release toxic HCN gas) and sulfide salts (may release toxic H <sub>2</sub> gas).
<b>DECOMPOSITION</b>	Will not occur except at high temperatures.
<b>POLYMERIZATION</b>	Will not occur.

**FIRE AND EXPLOSION DATA**

<b>FLASH POINT</b>	Will not burn.	<b>FLAMMABLE LIMITS IN AIR % BY VOL.</b>
		<b>LOWER</b> Not applicable.
<b>AUTOIGNITION TEMPERATURE</b>	Not available.	<b>UPPER</b> 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** Keep personnel removed and upwind of fire. Wear self-contained breathing apparatus. Wear full protective equipment. Cool tank/container with water spray.

**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 from dried-down product, or mist may cause injury to the respiratory tract. Severe exposure may cause lung damage.

Inhalation 10 minute LC50 for zinc chloride: 2000 MG/M<sup>3</sup> 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/m<sup>3</sup> (as fume).

**SAFETY PRECAUTIONS**

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

Avoid breathing fumes, dust from dried-down product, 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**

<b>PROPER SHIPPING NAME</b>	Zinc Chloride, Solution
<b>HAZARD CLASS</b>	8, Corrosive Material
<b>I.D. NUMBER</b>	UN NO. 1840
<b>PACKING GROUP:</b>	P.G. III
<b>REPORTABLE QUANTITY</b>	1,000 Lbs.

**OTHER INFORMATION****SHIPPING CONTAINERS**

Tank cars or tank trucks.

**STORAGE CONDITIONS**

Keep drums in upright position; do not roll drums on side. Keep containers closed. Store in a well ventilated area.

**NPCA-HMIS RATINGS**

Health	3
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:	Yes
FIRE:	No
REACTIVITY	No
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**

Zaclon LLC  
2981 Independence Road  
Cleveland, Ohio 44115  
800-356-7327  
216-271-1601