

**MADISON INDUSTRIES, INC.  
OLD WATERWORKS ROAD  
OLD BRIDGE, NJ 08857**

Telephone: 732-727-2225

Facsimile: 732-727-2653

info@oldbridgechem.com

www.oldbridgechem.com

**MATERIAL SAFETY DATA SHEET**

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Page 1 of 4

**Common Name:** ZINC CHLORIDE SOLUTION

**Manufacturer:** Madison Industries, Inc.  
P.O. Box 175  
Old Bridge, New Jersey 08857

**Telephone:** 732-727-2225  
**Emergency Telephone:** 800-275-3924  
**24 Hour Emergency Telephone:** 800-424-9300 (Chemtrec)

**HAZARDOUS CLASSIFICATION:** NFPA: Health-2 / Fire-0 / Reactivity-0  
HMIS: Health-2 / Fire-0 / Reactivity-0

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**SECTION I. MATERIAL IDENTIFICATION**

Common Name: Zinc Chloride Solution  
Molecular Formula:  $ZnCl_2$  in water  
CAS Number: 7646-85-7

**SECTION II. PHYSICAL DATA**

Physical State: Liquid  
Boiling Point: 127 degrees C (266 degrees F)  
Melting Point: NA  
Freezing Point: -30 degrees F  
Vapor Pressure: ca. 3mm.  
Vapor Density: Vapor is water  
Volatiles %: 32.5%  
Specific Gravity: 1.6 to 2.0  
Solubility in  $H_2O$ : 100%  
Evaporation Rate: Less than 1 (Butyl Acetate = 1)  
Color: Colorless

Appearance:	Clear liquid
Odor:	Lemon scent
PH:	2.0
Zinc Content:	32.4 (SARA 313)

**SECTION III. FIRE AND EXPLOSION DATA**

Flash Point:	Will not burn
Extinguishing Media:	Not applicable
Special Fire Fighting Instructions:	Not applicable
Fire and Explosion Hazards:	May release Zinc Chloride and Zinc Oxide fumes and Hydrogen Chloride gas in a fire.

**SECTION IV. REACTIVITY DATA**

Stability:	Very stable at high temperatures.
Incompatibility:	Cyanide - may release toxic HCN. Sulfides - may release toxic Hydrogen Sulfide
Decomposition:	Will not occur except at high temperatures.
Polymerization:	Will not occur.

**SECTION V. HEALTH AND HAZARD INFORMATION**

Exposure Limits:	OSHA 8 hour Time Weighted Average (TWA) and ACGIH TLV-TWA for Zinc Chloride (fume) are one mg. per cubic meter.
Swallowing:	May cause burns of mouth and throat.
Skin:	May cause severe skin burns.
Eyes:	May cause severe cornea injury and result in permanent impairment of vision or even blindness.
Inhalation:	Dusts, mists or vapors, may cause severe irritation to upper respiratory tract. Severe exposure may cause pulmonary edema. Metal fume fever may result from inhaling Zinc Oxide, which is a possible decomposition product at high temperatures.
Carcinogenicity:	None as per NTP, OSHA, and IARC.

**SECTION VI. FIRST AID PROCEDURES**

Swallowing:	Give large amounts of milk or water. Do not induce vomiting. Call Poison Control Center or a physician. Do not give anything by mouth to an unconscious person.
Skin:	Immediately flush skin with plenty of water for 15 minutes. Remove contaminated clothing and shoes. Call a physician. Wash contaminated clothing before reuse.

Eyes: Immediately flush eyes with plenty of water for 15 minutes. Hold eyelids apart during irrigation. Call a physician.

Inhalation: If dusts, mists or vapors are inhaled, immediately remove person to fresh air and call a physician.

Carcinogenicity: None

#### **SECTION VII. HANDLING PRECAUTIONS**

Personal Protective Equipment: Chemical safety goggles. Rubber gloves when needed; rubber apron, rubber shoes, and transparent face shield.

Ventilation: Maintain good general ventilation to keep mists below exposure guidelines.

#### **SECTION VIII. SPILL OR LEAK PROCEDURES**

Spills or Leaks: Comply with Federal, State and Local regulations on reporting spills. Flush with plenty of water to an approved chemical sewer.

Waste Disposal: Comply with Federal, State and Local regulations. Zinc Chloride can be carefully reacted with Sodium Carbonate to form an insoluble Zinc Carbonate solid that can be scooped up and sent to a disposal contractor.

#### **SECTION IX. SPECIAL PRECAUTIONS**

Storage: Do not store in a steel container. Plastic or plastic lined or rubber lined containers or storage tanks should be used.

#### **SECTION X. REGULATORY INFORMATION**

NOTICE: The information herein is presented in good faith and believed to be accurate. However, no warranty, expressed or implied, is given. Regulatory requirements are subject to change and may differ from one location to another. It is the buyer's responsibility to ensure that its activities comply with Federal, State and local laws.

U.S. REGULATIONS: SARA 313 Information; This product contains the following substance subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372: **Zinc Compound** See Section X for concentrations SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following category:

**AN IMMEDIATE HEALTH HAZARD**

**SECTION XI. SHIPPING INFORMATION**  
ZINC CHLORIDE SOLUTION 8, UN1840, PGIII, RQ

**SECTION XII. MSDS PREPARATION INFORMATION**  
Prepared by: Joel L. Goldschmidt  
Vice President