



# SAFETY DATA SHEET

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## SECTION 1 PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: **Zirconium Dichloride Oxide Octahydrate**  
PRODUCT NUMBER: 3910  
CAS NUMBER: 13520-92-8  
SYNONYMS: Zirconium (IV) oxychloride octahydrate, zirconyl chloride octahydrate  
**MANUFACTURER:**

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## SECTION 2 HAZARDS IDENTIFICATION

### CLASSIFICATION OF SUBSTANCE OR MIXTURE

Pictogram



Signal Word

**Danger**

### Hazard Statements

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.

### Precautionary Phrases

P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash skin thoroughly after handling.
P280	Wear protective gloves/protective clothing/ eye protection/ face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.
P363	Wash contaminated clothing before reuse.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

## SECTION 2 HAZARDS IDENTIFICATION (Cont.)

### HMIS CLASSIFICATION:

Health: 3 Fire: 0 Reactivity Hazard: 1

### NFPA RATING:

Health: 3 Flammability: 0 Reactivity Hazard: 1

**EYE CONTACT:** Causes eye burns.

**SKIN CONTACT:** Causes severe skin burns.

**INHALATION:** May cause irritation of the respiratory tract with burning pain in the nose and throat. Causes chemical burns to the respiratory tract.

**INGESTION:** May cause severe and permanent damage to the digestive tract. Causes gastrointestinal tract.

## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Formula:  $ZrOCl_2 \cdot 8H_2O$

Molecular Weight: 322.25

CHEMICAL NAME	CAS#	%
Zirconium dichloride oxide octahydrate	13520-92-8	100

## SECTION 4 FIRST AID MEASURES

**EYE EXPOSURE:** Immediately flush the eyes with copious amounts of water for at least 15 minutes. Assure flushing under eyelid. A victim may need assistance in keeping their eyelids open. Get immediate competent medical attention.

**SKIN EXPOSURE:** Wash affected area with water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.

**INHALATION:** Remove to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if necessary.

**INGESTION:** Seek medical assistance immediately. Keep the victim calm. Give the victim water (only if conscious). Induce vomiting only if directed by medical personnel.

## SECTION 5 FIREFIGHTING MEASURES

**FLASH POINT:** Product is not flammable

**AUTO IGNITION TEMPERATURE:** Not available

**EXPLOSION LIMITS:** Not available

**EXTINGUISHING MEDIUM:** Use firefighting measures that suit the surrounding fire.

**SPECIAL FIRE FIGHTING PROCEDURES:** Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.

**HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS:** Hydrogen chloride gas and zirconium oxides

## SECTION 6 ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS:** Wear all appropriate equipment when using this material. Ensure adequate ventilation. Keep unprotected persons away.

**ENVIRONMENTAL PRECAUTIONS:** Prevent spillage from entering drains or allowing to be released into the environment.

**METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:** Use neutralizing agent. Mix with sand, transfer carefully to container and arrange for proper disposal. Wash site of spillage thoroughly with water and detergent.

## SECTION 7 HANDLING AND STORAGE

**PRECAUTIONS FOR SAFE HANDLING:** Wear appropriate personal protective equipment. Use with adequate ventilation. Handle under dry protective gas.

**CONDITIONS FOR SAFE STORAGE:** Store in cool, dry, and well-ventilated area. Store away from water, moisture, strong bases, and oxidizing agents. Hygroscopic. Store under dry inert gas. Protect from humidity and water.

## SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

### EXPOSURE CONTROLS

Component	Exposure Limits	Basis	Entity
Zirconium Dichloride Oxide	5 mg/m <sup>3</sup>	TLV	ACGIH
	10 mg/m <sup>3</sup>	STEL	ACGIH
	5 mg/m <sup>3</sup>	PEL	USA
	5 mg/m <sup>3</sup> *                      10 mg/m <sup>3</sup> **	TLV	USA
	10 mg/m <sup>3</sup>	STEL	OSHA

TWA: Time Weighted Average over 8 hours of work.  
TLV: Threshold Limit Value over 8 hours of work.

STEL: Short Term Exposure Limit during x minutes.  
PEL: Permissible Exposure Limit

**EYE PROTECTION:** Wear chemical safety glasses or goggles along with a face shield.

**SKIN PROTECTION:** Wear nitrile or rubber gloves, and a full-body suit.

**VENTILATION:** Provide local exhaust, preferably mechanical.

**RESPIRATOR:** Use an approved respirator.

**ADDITIONAL PROTECTION:** Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

**COLOR AND FORM:** White solid

**ODOR:** Acidic

**MOLECULAR WEIGHT:** 322.25

**BOILING POINT:** Not available

**MELTING POINT:** 150°C (dec.)

**SPECIFIC GRAVITY:** 1.91

**VAPOR DENSITY:** No data available

**SOLUBILITY IN WATER:** Soluble

## SECTION 10 STABILITY AND REACTIVITY

**STABILITY:** Stable

**HAZARDOUS POLYMERIZATION:** Will not occur

**CONDITIONS TO AVOID:** Incompatible materials, excess heat, and temperatures above 150° C. Exposure to moist air or water.

**INCOMPATIBILITY:** Strong oxidizing agents, strong acids, and strong bases.

**DECOMPOSITION PRODUCTS:** Hydrogen chloride and zirconium oxides.

## SECTION 11 TOXICOLOGICAL DATA

**ACUTE TOXICITY:** LD50 Oral – Rat – 3500 mg/kg.

**CARCINOGENIC EFFECTS:** No components of this product present at levels greater than or equal to 0.1% is identified a carcinogen.

**MUTAGENIC EFFECTS:** Not available

**TETRATOGENIC EFFECTS:** Not available

**RTECS:** ZH7250000

To the best of our knowledge the toxicological effects of this compound have not been fully investigated.

## SECTION 12 ECOLOGICAL DATA

No data available.

## SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of in according to local, state, and federal regulations.

## **SECTION 14 TRANSPORTATION DATA**

UN3260

Corrosive solid, acidic, inorganic, n.o.s.

(Zirconium dichloride oxide octahydrate)

CLASS 8

PG II

Marine Pollutant: No

## **SECTION 15 REGULATORY INFORMATION**

**TSCA:** Not listed in the TSCA inventory

**SARA 302/304:** Not Listed

**SARA 311/312:** Not Listed

**SARA (TITLE 313):** Not Listed

**CALIFORNIA PROP. 65:** Not Listed

**MASSACHUSETTS RIGHT TO KNOW:** Zirconium dichloride oxide

## **SECTION 16 OTHER INFORMATION**

**DISCLAIMER:** The information herein is believed to be accurate and reliable as of the date compiled. However, ProChem, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information in this document or any use of the product based on the information.

**DATE REVISED:** 11/24

**SDS DEPT.**