

FLINN SCIENTIFIC, INC.

Material Safety Data Sheet (MSDS)

MSDS #: 870.10

Revision Date: July 18, 2012

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Zirconyl Chloride

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

SECTION 2 — COMPOSITION, INFORMATION ON INGREDIENTS

Zirconyl chloride

Synonyms: Zirconium oxychloride, octahydrate; basic zirconium chloride

CAS#: 13520-92-8

SECTION 3 — HAZARDS IDENTIFICATION

White solid. Odorless.

Causes severe skin burns and eye damage. May be harmful if inhaled or swallowed. Destructive to mucous membranes and respiratory tissues.

FLINN AT-A-GLANCE

Health-3
Flammability-0
Reactivity-2
Exposure-3
Storage-1

0 is low hazard, 3 is high hazard

SECTION 4 — FIRST AID MEASURES

Call a physician and seek medical attention for further treatment, observation, and support after first aid.

Inhalation: Remove to fresh air at once. If breathing has stopped, give artificial respiration immediately.

Eye or External: Immediately flush with fresh water for at least 15 minutes.

Internal: Rinse mouth. Do NOT induce vomiting. Call a physician or poison control at once.

SECTION 5 — FIRE FIGHTING MEASURES

Not flammable or combustible.

NFPA CODE

When heated to decomposition, may emit toxic fumes of chlorine and hydrogen chloride.

None
established

Fire Fighting Instructions: Use a triclass, dry chemical fire extinguisher. Firefighters should wear PPE and SCBA with full facepiece operated in positive pressure mode.

Exposure limits: 5 mg/m³ (PEL as Zr, OSHA); 10 mg/m³ (STEL as Zr, ACGIH)

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Restrict unprotected personnel from area and ventilate area. Ventilate area. Avoid creating airborne dust. Sweep up spill and deposit in sealed bag or container. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with eyes, skin, and clothing. Use in a chemical fume hood. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White odorless solid

Melting point: 400 °C (decomposes)

Solubility: Water

pH: acidic

Formula: $\text{ZrOCl}_2 \cdot 8\text{H}_2\text{O}$

Specific gravity: 1.91

Formula weight: 322.25

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with heat, strong oxidizers, strong acids, strong bases.

Shelf life: Poor, hygroscopic; store in a Flinn Chem-Saf bag.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Corrosive to skin, eyes, mucous membranes and digestive tract.

ORL-RAT LD₅₀: 2950 mg/kg (as ZrOCl_2)

Chronic effects: N.A.

IHL-RAT LC₅₀: N.A.

Target organs: N.A.

SKN-RBT LD₅₀: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #24b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Corrosive solid, acidic, inorganic, n.o.s. (Zirconium dichloride oxide)

Hazard class: 8

UN number: 3260

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

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**Consult your copy of the *Flinn Science Catalog/Reference Manual*
for additional information about laboratory chemicals.**