

Zinc Chloride Anhydrous MSDS

Product Name and Identification

- **Product Name:** [Zinc Chloride Anhydrous](#)
- **Chemical Formula:** ZnCl_2
- **CAS Number:** 7646-85-7
- **Relevant Uses:** Industrial applications, including metal treatment, chemical synthesis, textile processing, and catalyst preparation.
- **Manufacturer/Supplier:** [Insert Manufacturer Information]
- **Emergency Contact Number:** [Insert Emergency Contact Information]

Composition/Ingredients

- **Chemical Name:** Zinc Chloride
- **Concentration:** 98-100%
- **Synonyms:** Anhydrous Zinc Dichloride
- **CAS Number:** 7646-85-7
- **EC Number:** 231-592-0

Hazards Identification

- **Classification:**
 - Corrosive to metals (Category 1)
 - Acute toxicity (Category 4, oral)
 - Skin corrosion (Category 1B)
 - Serious eye damage (Category 1)
- **Hazard Statements:**
 - H290: May be corrosive to metals.
 - H302: Harmful if swallowed.
 - H314: Causes severe skin burns and eye damage.
- **Precautionary Statements:**
 - P234: Keep only in original container.
 - P280: Wear protective gloves, protective clothing, and eye/face protection.
 - P301 + P330 + P331: IF SWALLOWED, rinse mouth. Do NOT induce vomiting.
 - P303 + P361 + P353: IF ON SKIN (or hair), remove immediately all contaminated clothing and rinse skin with water.

First Aid Measures

- **General Advice:**
 - Seek medical attention for any exposure. Show this data sheet to the treating physician.

- **If Inhaled:**
 - Move to fresh air and keep the affected person at rest. Seek medical attention if breathing becomes difficult.
- **If on Skin:**
 - Wash immediately with soap and plenty of water. Remove contaminated clothing and do not reuse until thoroughly cleaned. If irritation persists, seek medical attention.
- **If in Eyes:**
 - Rinse immediately with water for at least 15 minutes, lifting the eyelids occasionally. Remove contact lenses if present. Seek medical attention immediately.
- **If Swallowed:**
 - Rinse the mouth with water. Do not induce vomiting unless directed by medical personnel. Consult a doctor immediately.

Handling and Storage

- **Handling:**
 - Use only in well-ventilated areas. Avoid inhalation of dust or fumes, and prevent contact with skin and eyes. Handle with care and avoid ingesting.
 - Wear appropriate personal protective equipment (PPE).
- **Storage:**
 - Store in a tightly sealed container in a cool, dry, and well-ventilated area. Keep away from moisture, acids, and incompatible materials like oxidizers.

Exposure Controls/Personal Protection

- **Exposure Limits:**
 - OSHA PEL (TWA): 1 mg/m³ (fume)
 - ACGIH TLV (TWA): 1 mg/m³ (fume)
- **Personal Protective Equipment (PPE):**
 - **Respiratory Protection:**
 - Use an approved particulate respirator if ventilation is inadequate or if limits are exceeded.
 - **Eye Protection:**
 - Wear chemical-resistant safety goggles or a full-face shield.
 - **Skin Protection:**
 - Use chemical-resistant gloves and full protective clothing to prevent skin contact.
 - **General Hygiene:**
 - Wash hands thoroughly after handling. Do not eat, drink, or smoke when using this product.

Physical and Chemical Properties

- **Appearance:** White crystalline solid
- **Odor:** Odorless
- **pH** (aqueous solution): Strongly acidic
- **Melting Point:** 283°C
- **Boiling Point:** ~732°C
- **Flash Point:** Not applicable
- **Solubility:**
 - Soluble in water, forming a highly exothermic reaction. Completely soluble in ethanol and glycerin.
- **Density:** ~2.91 g/cm³ at 25°C
- **Vapor Pressure:** Negligible at ambient temperatures

Stability and Reactivity

- **Stability:**
 - Stable under normal conditions. Reacts with water to form an acidic solution, releasing heat.
- **Reactivity:**
 - Reacts with water, acids, and alkalis. May corrode metals.
- **Conditions to Avoid:**
 - Avoid exposure to moisture, high temperatures, and incompatible materials.
- **Hazardous Decomposition Products:**
 - Emits zinc oxide and hydrogen chloride gases when heated to decomposition.

Toxicological Information

- **Acute Toxicity:**
 - Oral LD50 (rat): ~350 mg/kg
 - Skin LD50 (rabbit): ~2000 mg/kg (estimated based on available data)
- **Skin Corrosion/Irritation:**
 - Causes severe burns and skin damage on contact.
- **Eye Damage:**
 - Causes serious damage and potential blindness with direct exposure.
- **Chronic Effects:**
 - Prolonged inhalation exposure may cause respiratory irritation or pulmonary edema.

Disposal Considerations

- **Waste Treatment Methods:**
 - Dispose of material and any contaminated packaging in accordance with local, regional, and national regulations.
 - Do not discharge into drains or water systems.
- **Packaging Waste:**

- Empty containers should be considered hazardous waste unless thoroughly cleaned. Follow proper protocols for disposal.