

Zinc Metal

1. General information

The information contained herein was obtained from sources believed to be reliable; Electrochemical Devices, Inc. (EDI) disclaims all liability for the content. This information applies to material in bulk form and may not be relevant to the small quantities of material used in our products. Zinc metal is present in EDI reference electrodes with **ZIN** in the second grouping of the model designation as well as in underground references electrodes designated by **UD** in the model designation. In all cases, the material is entirely contained within the electrode housing.

Synonyms: None

CAS#: 7440-66-6

2. Hazard Overview

Appearance: grey solid.

Caution! May cause eye, skin, and respiratory tract irritation. The toxicological properties of this material have not been fully investigated.

Target Organs: No data found.

Potential Health Effects

Eye: May cause eye irritation.

Skin: May cause skin irritation.

Ingestion: May cause irritation of the digestive tract. The toxicological properties of this substance have not been fully investigated.

Inhalation: May cause respiratory tract irritation. Inhalation of fumes may cause metal fume fever, which is characterized by flu-like symptoms with metallic taste, fever, chills, cough, weakness, chest pain, muscle pain and increased white blood cell count. The toxicological properties of this substance have not been fully investigated.

Chronic: Repeated inhalation may cause chronic bronchitis.

3. First Aid

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Get medical aid if irritation develops or persists. Wash clothing before reuse. Flush skin with plenty of soap and water.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

4. Fire Fighting

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire.

Extinguishing Media: Use agent most appropriate to extinguish fire.

Flash Point: Not available.

Autoignition Temperature: 860 deg F (460 deg C)

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 1; Flammability: 0; Instability: 0

5. Accidental Release

General Information: Use proper personal protective equipment as indicated in Section 7.

Spills/Leaks: Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Avoid generating dusty conditions. Provide ventilation.

6. Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use only in a well-ventilated area. Use with adequate ventilation. Do not allow water to get into the container because of violent reaction. Avoid contact with eyes, skin, and clothing. Avoid contact with skin and eyes. Keep container tightly closed. Avoid ingestion and inhalation. Do not allow contact with water. Keep from contact with moist air and steam.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

7. Exposure Control

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits:

ACGIH: none listed

NIOSH: none listed

OSHA - Final PELs: none listed

OSHA Vacated PELs: none listed

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

8. Physical and Chemical Characteristics

Physical State: Solid

Appearance: grey

Odor: odorless

pH: Not available.

Vapor Pressure: 1 mm Hg @ 487C

Vapor Density: Not available.

Evaporation Rate: Not applicable

Viscosity: Not applicable

Boiling Point: 908 deg C

Freezing/Melting Point: 419 deg C

Decomposition Temperature: Not available.

Solubility: Reacts with water

Specific Gravity/Density: 7.14

Molecular Formula: Zn

Molecular Weight: 65.38

9. Stability and Reactivity

Chemical Stability: Stable.

Conditions to Avoid: Excess heat.

Incompatibilities with Other Materials: Oxidizing agents.

Hazardous Decomposition Products: Irritating and toxic fumes and gases, toxic fumes of zinc oxide.

Hazardous Polymerization: Has not been reported

10. Toxicological Information

LD50/LC50: Not available.

Carcinogenicity: CAS# 7440-66-6: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found.

Teratogenicity: No information found.

Reproductive Effects: No information found.

Mutagenicity: No information found.

Neurotoxicity: No information found.

11. Ecological Information

No information available.