



1) Identification

Effective Date: 01/04/2005

Product Name: Extruded Zinc Ribbon Anodes

2) Composition

Element	Range WT %
Zinc (Zn)	Remainder
Aluminum (Al)	0.005 max
Iron (Fe)	0.0014 max
Copper (Cu)	0.002 max
Cadmium (Cd)	0.003 max
Lead (Pb)	0.003 max

3) Physical Properties

Physical Form:	Solid
Boiling Point:	907°C or 1,665°F
Melting Point:	420°C or 788°F
Vapor Pressure:	N/A
Vapor Density:	N/A
Soluble in water:	N/A
Odor:	None
Specific Gravity:	7.14
Appearance:	Silver

4) Exposure Limits

None

5) Fire and Explosion Hazard Data

Flash Point (Method Used):	N/A (N/A)
Flammable Limits:	Zinc Dust 0.48 oz/cu. ft.
LFL: N/A	UEL: N/A
Extinguishing Media:	Dry sand or metal extinguishing powders; Low pressure CO ₂
Special Fire Fighting Procedures:	Use NIOSHA/MSHA-approved self-contained breathing apparatus & full protective clothing if involved in fire.
Unusual Fire and Explosion Hazards:	Finely divided zinc dust may form explosive mixtures with air. Contact with acids or alkaline hydroxides may create hydrogen gas which could reach explosive concentrations.

6) Reactivity Data

Stability: Stable

Incompatibility (Materials to Avoid): May react with acids or alkaline hydroxides. Zinc is incompatible with: ammonium nitrate, barium dioxide, barium dinitrate, chlorates, chlorides, fluorides, chlorine trifluoride, chromic trioxide, hydrazine mononitrate, hydroxylamine, performic acid, potassium nitrate, tellurium, sulfur, water (when zinc is in the form of dusts or very fine powder), sodium hydroxide, nitrobenzene, oxidants.

NOTE: This list is not exhaustive. Verify technical documents to determine if there are any incompatibilities with your process.

Hazardous Decomposition or Byproducts: At temperatures above the melting point, metallic oxide fumes may evolve.

Hazardous Polymerization: Will not occur.

7) Health Hazard Data

Route(s) of Entry:

Eyes: Mechanical injury only.

Skin Contact: Mechanical injury only. Molten material will burn skin.

Inhalation: Fumes or dust may cause irritation to upper respiratory system.

Ingestion: Unlikely due to physical state. Dusts produced incidental to industrial handling are not likely to cause serious injury; however, ingestion of larger amounts could cause serious injury.

Health Hazards (Acute and Chronic): Acute. Excessive inhalation of freshly formed fumes may produce symptoms known as metal fume fever or "zinc shakes" an acute self-limiting condition without recognized complications.

Carcinogenicity: N/A

Signs and Symptoms of Exposure: Fever, chills, headache, "flu-like" symptoms and metallic taste.

Medical Conditions Generally Aggravated by Exposure: May be allergic, may aggravate respiratory problems ie: emphysema & asthma.

Emergency and First Aid Procedures: Treat as an Emergency. Remove from exposure, bed rest and aspirin may afford some relief, recovery is complete in 24 to 48 hours. Refer to a physician.

8) Precautions for Safe Handling and Use

Steps to be taken in case material is released or spilled: Bulk material may be returned to process. Any normal cleanup procedure is applicable.

Precautions to be taken in Handling and Storage: Avoid inhalation or ingestion of dust, fume and/or mist. Do not consume food, beverages or tobacco in workplace. Practice good housekeeping and personal hygiene procedures to prevent accumulation of dust & to keep airborne dust to a minimum. Store away from incompatible materials. Should waste disposal be necessary; follow Federal, State and Local regulations.

9) Control Measures (Other Precautions)

Ventilation: Local Exhaust To keep below TLV

Mechanical (General): To keep below TLV

Special: Store dry

Protective Clothing or Equipment: Gloves; if dust present. Safety glasses; if dusty, eyewash. Steel toe footwear.

Respiratory Protection (Specify Type): NIOSH/MSHA approved respirator for toxic dust, fume, mist.

The statements and technical information in this document are believed to be accurate as the date of this document. Since the conditions and methods of use of this product and of the information referred to herein are beyond our control, American Carbon expressly disclaims any and all liability as to a result obtained or arising from an use of the product or reliance on such information.