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MATERIAL SAFETY DATA SHEET

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Emergency Contact: Sales Manager
or your local poison control center.

Date of last revision 6/1/98

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SECTION 1 - MATERIAL IDENTIFICATION

CHEMICAL NAME	ZINC	CAS NO. 7440-66-6
TRADE NAME/SYNONYMS	SPECIAL HIGH GRADE ZINC SHG ZINC BALL ANODES SHG ZINC BAR ANODES SHG ZINC SLABS	
CHEMICAL FAMILY	ELEMENTARY METAL	
MOLECULAR FORMULA	Zn	
MOLECULAR WEIGHT	65.38	

SECTION 2 - INGREDIENTS & HAZARDS

MATERIAL/COMPONENT	CAS No.	WEIGHT %	PEL	TLV
			(As Zinc Oxide)	
Zinc	7440-66-6	99.9	Dust 5 mg/m ³ Fume 5 mg/m ³	10 mg/m ³ 5mg/m ³

SUPERFUND AMENDMENTS & RESTORATION ACT - TITLE III APPLICABILITY

Section 312 40CFR 370.4	PHYSICAL HAZARD ____ Fire ____ Release of Pressure ____ Reactivity	HEALTH HAZARD ____ X Acute ____ X Chronic (As Zinc Oxide)
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Section 313
40 CFR 372.85

ZINC COMPOUNDS

This material or the components of this material are included in the Toxic Chemical Inventory as required in section 8(B) of the Toxic Substance Control Act (Public Law 94-469) & is codified in 40 CFR 720

SECTION 7 - HEALTH HAZARD INFORMATION

ROUTE(S) OF ENTRY: Ingestion, inhalation
TARGET ORGAN(S): (Zinc Oxide) Respiratory System

ACUTE EXPOSURE: Skin Contact - Marked irritation
Eye Contact - Marked irritation
Ingestion - None known or anticipated

Inhalation of Dust, Fume or Oxide - Metal fume fever (cough, fever, chills, headache, tight chest, nausea) sweet metal taste, dry throat.
Lung damage/edema.

CHRONIC EXPOSURE: Skin Contact - May cause dermatitis
Eye Contact - May cause conjunctivitis
Ingestion - None known or anticipated

Inhalation of Zinc Oxide Fume - Low pulmonary functioning, dyspnea, rales, fatigue, blurred vision, back pain.

LISTED AS A SUSPECTED OR CONFIRMED CARCINOGEN BY: No agency or review group.

FIRST AID: Skin Contact - Remove contaminated clothing. Wash affected area(s) with soap or mild detergent and large amounts of water. Seek medical attention.

Eye Contact - Wash eyes with large amounts of water (15 minute minimum). Seek medical attention.

Ingestion - If victim is conscious induce vomiting. Seek medical attention.

Inhalation - Remove victim to fresh air environment. If breathing is difficult administer oxygen. If breathing has stopped administer artificial respiration. Keep victim warm and calm. Seek medical attention.

SECTION 3 - PHYSICAL DATA

BOILING POINT:	1665° F/ 907° C	EVAPORATION RATE:	No Data
VAPOR PRESSURE:	N/A	SPECIFIC GRAVITY:	7.13
VAPOR DENSITY:	N/A	MELTING POINT:	788 DEG. F
APPEARANCE & ODOR:	Bluish-White Metallic Shapes		

SECTION 4 - FIRE & EXPLOSION DATA

FLASH POINT:	N/A
UEL:	N/A
LEL:	N/A
AUTOIGNITION:	1256° F/ 680° C
EXTINGUISHING MEDIA:	Class D Fire Extinguisher, dry sand, or vermiculite. Water may be ineffective as an extinguishing agent, but water spray or fog may be used as a cooling agent for closed containers.

SPECIAL FIRE

FIGHTING CONSIDERATIONS: See Section 5 for decomposition products. When dealing with known or unknown thermal decomposition products the use of Self-contained breathing apparatus (SCBA) and structural fire fighter's protective clothing will provide limited protection.

SECTION 5 - REACTIVITY DATA

Material is STABLE under normal temperatures and pressures.

THERMAL DECOMPOSITION:	May release toxic & hazardous fumes and oxides of Zinc.
HAZARDOUS POLYMERIZATION:	Has not been reported to occur under normal temperatures and pressures.
INCOMPATIBLE MATERIAL(S):	Zinc Oxide - Chlorinated Rubber.
CONDITIONS TO AVOID:	See incompatible materials.

SECTION 6 - SPILL, LEAK, AND DISPOSAL INFORMATION

Cleanup personnel need not use respiratory protection or other protective clothing in responding to spills of this material. Provide adequate ventilation. Confine the spill to as small an area as possible. Do not let material enter sewers or open watersheds. Use manual or mechanical means to pick up material. Place retrieved material in a clean, dry container and cover. Keep unnecessary people away. Isolate hazard area and deny entry.

Dispose of waste and unused material in accordance with Federal, State and Local disposal regulations. Consult appropriate regulatory officials for information on such disposal(s).

EPA HAZARDOUS WASTE NUMBER:	(40 CFR 261.33) N/A
EPA REPORTABLE QUANTITY:	(40 CFR 117.3) N/A
AQUATIC TOXICITY:	No Data

SECTION 8 - PERSONAL PROTECTIVE EQUIPMENT

- VENTILATION:** Provide local exhaust or process enclosure ventilation to maintain exposure below OSHA guidelines (29 CFR 1910.1000 subpart z).
- RESPIRATORS:** If exposures cannot be maintained at or below established OSHA guidelines respiratory protection must be provided in accordance with 29 CFR 1910.134 requirements.

GENERAL GUIDE LINES

KNOWN CONCENTRATIONS <PEL with Oxygen levels >19.5% : No respirator required.

KNOWN CONCENTRATIONS >PEL <IDLH with Oxygen levels >19.5% : Air-purifying full facepiece respirator with high-efficient particulate filters.

UNKNOWN CONCENTRATIONS AND/OR >IDLH and/or Oxygen levels <19.5% : Self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive pressure mode. Supplied-air respirator with full facepiece operated in pressure-demand or other positive pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive pressure mode.

SKIN PROTECTION : Wear appropriate protective clothing and chemical resistant gloves as needed to prevent skin contact. Consult manufacturer to determine appropriate type(s) of gloves or clothing for your given application. Clean contaminated clothing and protective equipment before reuse. Wash thoroughly after handling material.

EYE PROTECTION : Where there is a potential for eye contact, wear splash proof or dust proof goggles.

OTHER : As deemed necessary by in-house health & safety staff.

SECTION 9 - SPECIAL PRECAUTIONS AND COMMENTS

STORAGE : Zinc ingots may contain voids that could be a site of water accumulation and/or precipitation. If ingots are remelted with such accumulation, a potentially hazardous situation could exist. Storage to avoid such accumulation should be utilized.

TRANSPORTATION DATA :

49 CFR	Hazardous Material Description and shipping name	Hazard Class
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172.101	Not listed	
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ID Number:	N/A	
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Guide Number:	N/A	
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Label(s):	N/A	
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