



MATERIAL SAFETY DATA SHEET

#3 ZINC ALLOY

Date of Issue May 16, 2000

HMIS System	
Health	0
Flammability	0
Reactivity	0
Personal Protection Equip	A

Identification

Chemical Name: Not Applicable
 Material Name/Identifier: #3 Alloy
 Chemical Family: Metals
 Trade Name and Synonyms: None
 Chemical Formula: See Below (Ingredients)
 Material Use: General Uses

Manufacturer

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Purity Zinc Metals Phone: (931) 552-8080
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Ingredients of Material

<u>HAZARDOUS INGREDIENTS</u>	<u>APPROX. CONC-ENTRATION %</u>	<u>C.A.S.N.A. OR U.N. NUMBERS</u>	<u>EXPOSURE LIMITS *</u>	<u>LDI50] LC]50] SPECIFY SPECIES AND ROUTE</u>
Zinc	96	7440-66-6	OSHA PEL ** - None Established ACGIH TLV ** - None Established NIOSH REL ** - None Established	Human inh. TCLo 124 mg/cu.m./50M
Aluminum	4	7429-90-5	5.0 mg/cu.m OSHA PEL *** - None Established ACGIH TLV *** - None Established NIOSH REL - 10 mg/cu.m. (total) 5 mg/cu.m. (respirable)	No Data

* OSHA - Occupational Safety and Health Administration; ACGIH - American Conference of Government Industrial Hygiene; NIOSH- National Institute for Occupational Safety and Health

**The OSHA PEL for zinc oxide dust is 10 mg/cu.m. (total) and 5 mg/cu.m. (respirable); the OSHA PEL for zinc oxide fume is 5 mg/cum.m. The ACGIH PEL for zinc oxide dust is 10 mg/cu.m. and the ACGIH PEL for zinc oxide fume is 5

***The OSHA PEL for aluminum dust is 15 mg/cu.m. and 5 mg/cu.m. (respirable). The ACGIH TLV is 10 mg/cum.m. for metal dust and 5 mg/cu.m. as welding fumes.

EEC Classification - zinc, aluminum and copper are not listed as dangerous substances.

Physical Data for Material

Physical State:	<input type="checkbox"/> Gas <input type="checkbox"/> Liquid <input checked="" type="checkbox"/> Solid
Odour and Appearance:	No Odour; Silver Grey Colour
Odour Threshold (p.p.m.):	Not Applicable
Specific Gravity:	7.1
Taste:	Metallic
Vapour Pressure (mm) (Air = 1):	Not Applicable
Vapour Density (Degree C):	Not Applicable
Evaporation Rate (Degree C):	Not Applicable
Boiling Point (Degree C):	907 degrees C
Freezing Point:	420 degrees C
Solubility in Water:	Insoluble
Volatility:	Not Applicable
PH 1% soln/water:	Not Applicable
Water/Oil Dist. Coefficient:	Not Applicable

Soluble acids and alkaline bases.

Fire and Explosion Hazard of Material

Flammability <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Metal ingot is not flammable.
If yes, under which conditions:	
Means of Extinction:	This product is NOT FLAMMABLE. Use fire fighting equipment and procedures suitable to the immediate environment. Do not use water or foam. Use dry chemical, sand or special powder. Fire fighters should be equipped with NIOSH approved self-contained breathing apparatus.
Special Procedures:	Use caution when immersing solid zinc into a molten bath. Cold ingots/Moisture/Condensation can cause molten metal to bubble, splash or explode.
Flashpoint (Degree C) and Method:	Not Applicable
Upper Explosion Limit (% by volume):	Not Applicable
Lower Explosion Limit (% by volume):	Not Applicable
Auto Ignition Temperature (Degree C):	Not Applicable
TDG Flammability Classification:	Not Applicable
Hazardous Combustion Products:	Zinc Oxide Fume



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Explosion Data

Sensitivity to Chemical Impact: Not Applicable
Rate of Burning: Not Applicable
Explosive Powder: Not Available

Reactivity Data

Chemical Stability: Yes No
If no, under which conditions? Metal in ingot form is stable.

Incompatibility to other substances: Yes No
If so, which ones? Sulfur, Halogens and strong Oxidizing agents.

Reactivity and Under What Conditions: Contact with acids or alkaline hydroxides will generate hydrogen gas. Accumulated hydrogen gas is flammable and explosive.

Hazardous Decomposition Products: Heating of this product may generate zinc oxide fumes generally over 900 degrees C.

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Hazards Identification

Skin / Eyes: Acute: Contact with zinc powder or dust or zinc oxide fume may cause local irritation.

Inhalation: When excessive zinc or aluminum oxide fumes are inhaled, it may cause flu-like symptoms or fever, chills and nausea.

Ingestion: When ingested in excessive amounts, zinc can irritate the stomach resulting in nausea and vomiting.

Effects of Chronic Exposure to Product: There is no chronic form of zinc metal fume fever but in rare instances an acute incident may be followed by complaints such as bronchitis or pneumonia. Aluminum dust has little or no adverse effect on the lungs and does not produce any identifiable toxic effects in the body.

Carcinogen: Zinc and aluminum are not listed as carcinogens by OSHA, the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC), or EEC.

Preventive Measures

Personal Protective Equipment: Respiratory and Eye Protection

Gloves (Specify): Heat Resistant

Respiratory (Specify): If dust/fume is generated use NIOSH/MSHA approved mask.

Eye (Specify): With molten metal use safety glasses and face shield.

Footwear (Specify): Safety boots.

Clothing (Specify): Suitable to protect from hot metal splash.

Other (Specify): None

Engineering Controls (e.g. ventilation, enclosed process, specify): Local ventilation when fume is generated.



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Leak and Spill Procedure:	Collect spilled material and return to process or supplier.
Waste Disposal:	If material cannot be returned to process or salvage, dispose of only in accordance with applicable regulations.
Handling Procedures and Equipment:	Only dry metal ingot should be added to molten bath.
Storage Requirements:	Keep in dry warm area indoors.

First Aid Measures

Skin:	Remove contaminated clothing. Wash affected areas with soap and water.
Eye:	Flush eyes with luke warm gently running water. If irritation persists, consult physician.
Inhalation:	If exposed to excessive fume, remove to fresh air; administer oxygen if needed. Keep patient warm and seek medical assistance.
Ingestion:	Generally not considered toxic if ingested however, consult physician immediately.
General Advise:	Practice good personal hygiene. Wash hands before eating or smoking.

Other Regulatory Information and Pictograms

Other Regulations:

Canadian Environmental Protection Act (CEPA) - This product is on the Domestic Substance List (DSL) and is acceptable for use under the provisions of CEPA.

DOT - (Canada) - No pictograms required. Not a regulated product.

Ingredients are listed on TSCA Inventory.

Canadian: WHMIS CLASSIFICATION - Not a controlled product under CPR. This product has been classified in accordance with the hazard criteria of the CPR.

Preparation Date of MSDS

Additional Information/Comments: This Material Safety Data Sheet is offered solely for your information, consideration and investigation. Purity Zinc Metals provides no warranties either expressed or implied and assumes no responsibility for the accuracy or completeness of the data contained herein and expressly disclaims all liability for reliance thereon. The MSDS for this product is provided as a guide for safe handling and usage. Those using the product should read and understand this information herein and properly train those using this product.

Prepared by: Health & Safety Department
Phone #: (905) 662-4802
Date: May 16, 2000

Sources Used: CC INFO RTECS NFPA
NIOSH - National Institute of Occupational Safety and Health
OSHA/NIOSH - Occupational Safety and Health Administration
TDG - Transportation Dangerous Goods