

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

Identification

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

Manufacturer

Purity Zinc Metals Phone: (905) 662-4802
 288-310 Arvin Avenue Fax: (905) 664-3944
 Stoney Creek, Ontario L8E 2M1

Purity Zinc Metals Phone: (931) 552-8080
 498 International Boulevard Fax: (931) 552-5588
 Clarksville, TN 37040

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>LD[50] LC[50] SPECIFY SPECIES AND ROUTE</u> |
|------------------------------|---------------------------------|-----------------------------------|--|--|
| Zinc | 87 - 89 | 7440-66-6 | ACGIH TLV-TWA 5.0 mg/cu.m - 15.0 mg/cu.m.- | Not Available |
| Aluminum | 11 - 13 | 7429-90-5 | 15.0 mg/cu.m | Not Available |

Physical Data for Material

Physical State: [] Gas [] Liquid [X] Solid
 Odour and Appearance: No Odour; Silver Grey Granules
 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



MATERIAL SAFETY DATA SHEET

ALZINOY

Date of Issue May 16, 2000

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 Yes No
If yes, under which conditions: Metal ingot is not flammable.

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

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.

Material Name/Identifier: ALZINOY

Toxicological Properties of Product

| | |
|---|---|
| Route of Entry: | <input checked="" type="checkbox"/> Skin Contact <input type="checkbox"/> Skin Absorption <input checked="" type="checkbox"/> Eye Contact <input checked="" type="checkbox"/> Inhalation Acute <input type="checkbox"/> Inhalation Chronic <input checked="" type="checkbox"/> Ingestion |
| Effects of Acute Exposure to Product: | May irritate eyes or skin. When zinc fumes are inhaled they may cause flu-like symptoms or fever, chills and nausea. Ingestion of fumes may cause fever, stomach cramps and diarrhea. |
| Effects of Chronic Exposure to Product: | There are no known effects from chronic exposure to this product. |
| LD[50] of Product (Specify Species and Route): | Not available. |
| Irritancy of Product: | No reports found. |
| Exposure Limits of Product: | Not Available |
| LC[50] of Product (Specify Species): | Not Available |
| Sensitization to Product Materials: | None Reported |
| Synergistic: | None Reported |
| <input type="checkbox"/> Carcinogenicity <input type="checkbox"/> Reproductive Effects <input type="checkbox"/> Teratogenicity <input type="checkbox"/> Mutagenicity Does not meet WHMIS Criteria for these effects. | |

Preventive Measures

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| 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. |
| Leak and Spill Procedure: | Collect spilled material and return to process or supplier. |
| Waste Disposal: | Consult local and provincial environmental authorities. |
| Handling Procedures and Equipment: | Only dry metal ingot should be added to molten bath. |
| Storage Requirements: | Keep in dry warm area indoors. |
| Special Shipping Information: | Not Applicable |



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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.

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