

**Material Safety Data Sheet**

May be used to comply with  
OSHA's Hazard Communication Standard.  
29 CFR 1910.1200. Standard must be  
consulted for specific requirements.

**U.S. Department of Labor**

Occupational Safety and Health Administration  
(Non-Mandatory Form)  
Form Approved  
OMB No. 1218-0072



IDENTITY (As Used on Label and List) Note: Blank spaces are not permitted. If any item is not applicable or no information is available, the space must be marked to indicate that.

**Section I ZINC ALLOYS**

Manufacturer's Name <b>ALLIED METAL CO.</b>	Emergency Telephone Number <b>312/225-2800</b>
Address (Number, Street, City, State, and ZIP Code) <b>2051 S. CANAL ST.</b>	Telephone Number for Information <b>312/225-2800</b>
<b>CHICAGO, IL. 60616</b>	Date Prepared <b>9/2/96</b>
	Signature of Preparer (optional) <i>[Handwritten Signature]</i>

**Section II — Hazardous Ingredients/Identity Information**

Hazardous Component (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
ZINC	5MG/M <sup>3</sup>	10MG/M <sup>3</sup>		REMAINDER
COPPER	0.1MG/M <sup>3</sup>	0.2MG/M <sup>3</sup>		3.5% MAX
MAG	15MG/M <sup>3</sup>	10MG/M <sup>3</sup>		.25% MAX
ALUM	15MG/M <sup>3</sup>	10MG/M <sup>3</sup>		28% MAX
IRON	10MG/M <sup>3</sup>	5MG/M <sup>3</sup>		.20% MAX
TIN	2MG/M <sup>3</sup>	2MG/M <sup>3</sup>		.01% MAX
LEAD	.05MG/M <sup>3</sup>	.15MG/M <sup>3</sup>		.02% MAX
CADMIUM	.05MG/M <sup>3</sup>			.015% MAX

**Section III — Physical/Chemical Characteristics**

Boiling Point <b>APPROX. 1663</b>	Specific Gravity (H <sub>2</sub> O = 1) <b>RANGE 5.0 - 7.18</b>
Vapor Pressure (mm Hg) <b>N/A</b>	Melting Point <b>APPROX. 780</b>
Vapor Density (AIR = 1) <b>N/A</b>	Evaporation Rate (Butyl Acetate = 1) <b>N/2</b>
Solubility in Water <b>NONE</b>	
Appearance and Odor <b>SOLID - BLuish-WHITE-NO ODOR</b>	

**Section IV — Fire and Explosion Hazard Data**

Flash Point (Method Used) <b>N/A</b>	Flammable Limits <b>N/A</b>	LEL <b>N/A</b>	UEL <b>N/A</b>
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**Extinguishing Media**  
USE DRY CHEMICAL OR CARBON DIOXIDE EXTINGUISHING MEDIA

**Special Fire Fighting Procedures**  
ZINC DUST IS FLAMMABLE, WHEN SUSPENDED IN AIR AT CONCENTRATION EXCEEDING 430 G/M<sup>3</sup>

**Self-Contained Breathing Apparatus**  
SELF-CONTAINED BREATHING APPARATUS SHOULD BE USED WHEN FIGHTING A FIRE

**Unusual Fire and Explosion Hazards**  
ZINC DUST IN CONTACT WITH WATER OR ACIDS EVOLVES HYDROGEN. ZINC OXIDE FUME MAY REACT VIOLENTLY WITH CHLORINATED RUBBER. WET METALLIC ZINC WHEN CHARGED INTO MOLTEN METAL IS AN EXPLOSIVE HAZARD.

OSHA 174, Sept. 1985

JUL 07 '97 15:07 FR ALLIED METAL CO 312 225 1161 TO 17332377706 20/10/02

Section V — Reactivity Data

Stability	Unstable	Conditions to Avoid
	Stable	X UNDER NORMAL CONDITION OR TRANSPORTATION, STORAGE AND USE. ZINC DUST IN CONTACT WITH ACIDS EVOLVE HYDROGEN GAS. ZINC OXIDE MAY REACT VIOLENTLY WITH CHLORINATED RUBBER
Incompatibility (Materials to Avoid)		
Hazardous Decomposition or Byproducts		

Hazardous Polymerization	May Occur	Conditions to Avoid
	Will Not Occur	X

Section VI — Health Hazard Data

Route(s) of Entry:	Inhalation? YES	Skin? YES	Ingestion? NOT NORMALLY
Health Hazards (Acute and Chronic)			
INHALATION OF ZINC DUST OR ZINC OXIDE FUMES CAN CAUSE METAL FUME FEVER. SKIN AND EYE CONTACT TO DUST OR FUMES CONTAINING ZINC CAN CAUSE SKIN AND EYE IRRITATION.			
Carcinogenicity:			
NTP?	IARC Monographs? NO	OSHA Regulated? NO	

Signs and Symptoms of Exposure  
 METAL FUME FEVER SYMPTOMS INCLUDE HEADACHE, FEVER, CHILLS, MUSCLE WEAKNESS, VOMITING, NAUSEA, SYMPTOMS USUALLY START SEVERAL HOURS AFTER EXPOSURE.

Medical Conditions Generally Aggravated by Exposure  
 PRE-EXISTING UPPER RESPIRATORY AND LUNG DISEASE.

Emergency and First Aid Procedures  
 METAL FUME FEVER: REMOVE TO FRESH AIR. IF BREATHING BECOMES DIFFICULT, GIVE OXYGEN AND CALL A PHYSICIAN.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled  
 IF METAL IS IN A SOLID FORM, COLLECT FOR REMELTING OR IF METAL IS IN A MOLTEN STATE, ALLOW TO COOL THEN COLLECT FOR REMELTING.

Waste Disposal Method  
 NOT A WASTE. COLLECT FOR RECYCLING - NOT FEDERALLY REGULATED.

Precautions to Be Taken in Handling and Storing  
 IF ZINC IS IN A MOLTEN STATE, AVOID CONTACT WITH WATER OR MOISTURE. IF IT IS IN A SOLID STATE, BE CAREFUL OF SHARP EDGES. STORE IN A DRY AREA. DO NOT ALLOW TO GET WET.

Other Precautions  
 USE SAFE FOUNDRY PRACTICES.

Section VIII — Control Measures

Respiratory Protection (Specify Type)			
REQUIRED WHEN CUTTING OR WELDING, USE PARTICLE MASK WITH ADEQUATE VENTILATION.			
Ventilation	Local Exhaust	Special	N/A
	Mechanical (General)	Other	N/A
Protective Gloves		Eye Protection	
YES! TO PREVENT CUTS OR BURNS IF METAL IS HIT, AS NEEDED		SAFETY GLASSES AND/OR FACE SHIELDS	
Other Protective Clothing or Equipment			
WHEN HANDLING MOLTEN ZINC, FIRE RETARDANT CLOTHING, FACE SHIELDS, HARD HAT, PROTECTIVE GLOVES & SPATS ARE RECOMMENDED.			
Work/Hygiene Practices			
GOOD NORMAL HYGIENIC PRACTICES ARE TO BE FOLLOWED.			

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