

MATERIAL SAFETY DATA SHEET

Product Name: Brass/Bronze rods, parts and wire
Chemical Family: Copper Alloys

Use of Product: article fabrication

Product includes the following CDA Alloys:

22000	31400 *	36000 *	46200	64200	79800 *
26000	34000 *	36500 *	46400	67000	85800 *
27000	34200 *	37100 *	48200 *	67300 *	87800
27200	34500 *	37700 *	48500 *	67400 *	87900 *
28000	35000 *	38000 *		67500	
	35300 *	38500 *	54400 *	69400	
	35600 *				

* Denotes leaded alloys

PHYSICAL DATA

Melting Point: 1500 - 2100°F
Boiling Point: N.A.

Specific Gravity: 7.5 - 9.0 g/cc
Vapor Pressure: N.A.

The product is a silver or yellow to red solid at room temperature and exhibits no odor. The product is insoluble in water.

CHEMICAL COMPOSITION

Cerro alloys may contain any or all of the chemical constituents listed below:

	<u>CAS No.</u>	<u>Range (%)</u>	<u>8 Hr. TWA</u>
Copper	7440-50-8	45 - 91	1 mg/M ³ dust 0.1 mg/M ³ fume
Zinc	7440-66-6	0 - 43	5 mg/M ³ oxide
Aluminum	7429-90-5	0 - 8	10 mg/M ³
Iron	7439-89-6	0 - 6	10 mg/M ³
Lead	7439-92-1	0 - 4.5	0.05 mg/M ³
Manganese	7439-96-5	0 - 5	1 mg/M ³
Nickel	7440-02-0	0 - 12.0	1 mg/M ³
Phosphorus	7723-14-0	0 - 0.5	0.1 mg/M ³
Silicon	7440-21-3	0 - 4.5	10 mg/M ³
Tin	7440-31-5	0 - 4.5	10 mg/M ³

STORAGE, FIRE & REACTIVITY

Flash Point: N.A.

Auto-ignition Temp: N.A.

Flammability Limits: N.A.

There are no fire or explosion hazards with these alloys. Never use water as an extinguishing agent around molten metal. Water will react violently with any molten metal.

The alloy is a stable, non-hazardous solid at room temperatures. Material may react with acids, bases or oxidizers.

Material does not present a significant health hazard under normal handling and storage conditions.

HEALTH HAZARD DATA

Under normal handling conditions the solid alloy presents no significant health hazards. Processing of the alloy by dust or fume producing operation (grinding, buffing, forgings, etc.) may result in the potential for exposure to airborne metal particulates or fume. The exposure levels in Section II are relevant to fumes and dusts.

Chronic exposure to copper, zinc, lead and manganese may cause metal fume fever. Symptoms of metal fume fever include fever, fatigue, dryness of throat, head and body ache, fever and chill. Overexposure to copper and lead may result in skin and hair discoloration. Chronic exposure may affect the central nervous system leading to emotional disturbances, gait and balance difficulties and paralysis.

Nickel and lead have been identified as potential cancer causing agents.

The product will not irritate the skin or eyes in bulk form. Particulates may cause dermatitis due to mechanical irritation.

First Aid:

Ingestion: Ingestion of significant amounts of copper alloy are unlikely. Seek medical help if large quantities of product are ingested.

Inhalation: Remove from exposure to dust or fume if present. Seek medical help if required.

Skin Contact: Wash thoroughly with soap and water.

Eye Contact: Flush with water for at least 15 minutes. Seek medical help if required.

SPILL PROCEDURES

Product is a non-hazardous solid. No special precautions are required for spills of bulk material. Scrap metal can be reclaimed for reuse. Follow Federal, State and local regulations regarding disposal.

SPECIAL PROTECTION INFORMATION

Typically no special protection is required during use of the product beyond that required for the process operation being employed. Where dust or fume levels are greater than those specified in Section II, NIOSH approved respiratory protection should be used.

SPECIAL PRECAUTIONS AND COMMENTS

Wet material should never be charged into a molten bath.

Eye protection should be used when cutting, grinding, machining or buffing product. Eye protection should also be used with any other process that generates dust, fumes or chips.

Wash hands thoroughly after use, especially before eating.

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