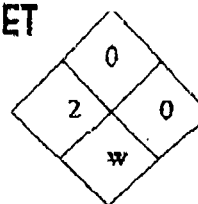




MATERIAL SAFETY DATA SHEET

alphametals.

600 Route 440
Jersey City, New Jersey 07304
Telephone 201-434-6778



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SECTION I. GENERAL INFORMATION

PRODUCT NAME (NUMBER) Solder Alloys of Lead, Tin, Silver, Bismuth, Antimony, and Indium
CHEMICAL FAMILY Inorganic Metals.
D.O.T. HAZARD CLASS Not regulated.

SECTION II. HAZARDOUS INGREDIENTS

INGREDIENTS	CAS NUMBER	WEIGHT PERCENT	OSHA PEL	ACGIH TLV
Lead } Product contains	7439-92-1		0.05 mg/cum	0.05 mg/cum
Tin } one or more of	7440-31-5		2.0 mg/cum	2.0 mg/cum
Silver } these metallic	7440-22-4	See	0.01 mg/cum	0.1 mg/cum
Bismuth } elements in varying	7440-69-9	Below	NE	NE
Antimony } percentages	7440-36-0		0.5 mg/cum	0.5 mg/cum
Indium }	7440-74-6		0.1 mg/cum	0.1 mg/cum

WEIGHT PERCENT Composition of solder alloys vary widely therefore weight percent or specific gravity is given. (See product label for composition.)

SECTION III. PHYSICAL DATA

(PUBLISHED OR ESTIMATED VALUES)

BOILING POINT Deg F.	NA	SPECIFIC GRAVITY (H ₂ O=1)	NA
VAPOR PRESSURE (mm Hg at 20 Deg. C.)	NA	% VOLATILE BY WEIGHT	NA
VAPOR DENSITY (AIR=1)	NA	EVAPORATION RATE	NA
SOLUBILITY IN WATER	Insoluble	pH	NA
APPEARANCE AND ODOR	Silver-gray metal, odorless, various shapes and sizes.		

SECTION IV. FIRE AND EXPLOSION HAZARD DATA

ESTIMATED FLAMMABLE LIMITS (% By Volume in Air)

LEL: NA UEL: NA

FLASH POINT Deg F. NA

EXTINGUISHING MEDIA NA

SPECIAL FIRE FIGHTING PROCEDURES Use NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing if involved in a fire.

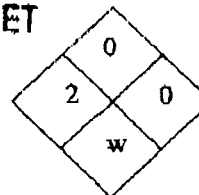
UNUSUAL FIRE AND EXPLOSION HAZARD Moderate in the form of dust when exposed to heat or flame. When heated to high temperatures, lead emits highly toxic fumes.



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SECTION V.(A) HEALTH HAZARD DATA

(Symptoms/Effects Of Overexposure)

LEAD: Exposure to high levels of airborne or ingested lead may produce symptoms of anemia, insomnia, weakness, constipation, nausea and abdominal pain. Overexposure may cause damage to blood-forming, nervous, reproductive, intestinal and urinary systems. For occupational exposure requirements see 29 CFR 1910.1025 Lead Standard and its appendices.

CHRONIC TOXICITY: Women of child bearing age should avoid exposure to lead and its inorganic compounds due to post-natal effects. Lead can cause potential injury to a developing fetus and possible effects on reproduction. For overexposure to TIN, SILVER, BISMUTH, ANTIMONY, and INDIUM see Section X.

LISTED CARCINOGENS: None of the metal elements of this product are confirmed as human carcinogens at this time by NTP, IARC, or OSHA. IARC classifies lead and some lead compounds as 2B carcinogens (possibly carcinogenic to humans).

MEDICAL CONDITIONS POSSIBLY AGGRAVATED: See Section X.

SECTION V.(B) HEALTH HAZARD DATA

(Emergency and First Aid Procedures)

INHALATION	Lead: Excessive overexposure may result in an acute or chronic illness. If symptoms are present, the individual should be removed from exposure and a physician consulted.
INGESTION	Call a physician or Poison Control Center at once.
SKIN CONTACT	For hot metal burns, exposed area should be cooled with water and medical attention sought. After handling solid solder wire, bar, etc., wash thoroughly with soap and water. Dust, vapor and/or fume are not readily absorbed through the skin.
EYE CONTACT	Flush with water, contact a physician. Dust or fume may cause irritation.

SECTION VI. REACTIVITY DATA

STABILITY		CONDITIONS	NA
STABLE:	X	UNSTABLE:	TO AVOID

INCOMPATIBILITY
(Materials to Avoid)

Oxidizing materials, acids, hydrogen peroxide >52%.

HAZARDOUS
DECOMPOSITION PRODUCTS.

Lead oxide and antimony oxide fume may be evolved at temperatures greater than 1000 deg F (538 C).

HAZARDOUS POLYMERIZATION

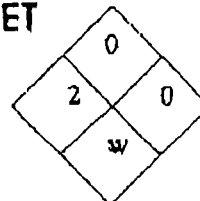
CONDITIONS



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SECTION VII. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Avoid inhalation of solder fume or dust. Vacuuming or washing is recommended. Do not use dry sweeping or compressed air cleaning systems.

WASTE DISPOSAL Scrap or waste solder should be recycled or stored in sealed containers for later disposal.

Must be in accordance with Federal, State and Local Laws and Regulations

SECTION VIII. SPECIAL PROTECTION

RESPIRATORY	A NIOSH/MSHA approved dust/fume respirator should be worn where airborne exposures may exceed OSHA/ACGIH permissible air concentrations.
EYEWEAR	Safety glasses and/or face protection is recommended for exposures to dust or splash of hot metal.
CLOTHING/ GLOVES	Protective gloves should be worn to reduce burn exposure. Work clothes should be worn and laundered in accordance with current OSHA lead standards.
VENTILATION	Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below permissible air concentrations.

SECTION IX. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Food and drink should not be consumed or tobacco products used, nor cosmetics applied in areas where solder may be used. Always wash hands after handling solder and before eating, drinking or smoking.

OTHER PRECAUTIONS:

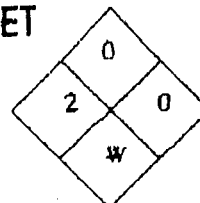
Containers: Since empty containers may retain product residues (vapor, liquid, or solid) all labeled hazard precautions must be observed. **FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN. DO NOT TAKE INTERNALLY.**



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SECTION X. ADDITIONAL INFORMATION

NOTES TO PHYSICIAN: Lead and its inorganic compounds are neurotoxins which may produce peripheral neuropathy. For an overview of the effects of lead exposure, consult Occupational Safety and Health Administration Appendix A of Occupational Exposure to Lead (29CFR1910.1025).

HEALTH HAZARD DATA: (continued)

OVEREXPOSURE TO:

TIN: Dust or fume may cause irritation of the skin, mucous membranes, and may result in a benign pneumoconiosis (stannosis).

SILVER: May cause discoloration of eyes and skin, (argyria).

BISMUTH: May cause foul breath, a blue-black line on the gums, and stomatitis.

ANTIMONY: May cause gastrointestinal upset, sleeplessness, irritability and muscular pain. May also cause respiratory tract irritation, metallic taste or damage to kidney, liver or nervous system.

INDIUM: May cause weight loss, pulmonary edema, blood damage and degenerative changes in liver and kidneys.

MEDICAL CONDITIONS POSSIBLY AGGRAVATED:

Diseases of the blood and blood-forming organs, kidneys, nervous and possibly reproductive systems.

REGULATORY INFORMATION

California State Proposition 65:

"WARNING! This product may contain LEAD known to the State of California to cause cancer, birth defects or other reproductive harm." (See product label.)

Toxic Substance Control Act (TSCA) Status:

All ingredients of this product are listed on the TSCA inventory.

SARA TITLE III (Section 313):

Components that may be present in this product at a level which could require reporting under this statute are:

Lead, Antimony, Silver (See product label.)

EMERGENCY TELEPHONE NUMBER

CHEMTREC

1-800-424-9300

DAY OR NIGHT

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