

HMIS RATING	
Health	N/A
Flammability	N/A
Reactivity	N/A

## MATERIAL SAFETY DATA SHEET

NFPA 704 RATING	
Health	3
Flammability	1
Reactivity	0
NFPA 30B LEVEL	
N/A	

Kimball-Midwest  
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### 1. PRODUCT IDENTIFICATION

PART NUMBER..... 83-411 - 1#  
PRODUCT NAME..... 50/50 SOLID WIRE SOLDER  
DOT SHIPPING..... Not regulated.

### 2. HAZARDOUS INGREDIENTS

Specific chemical identity, common names	OSHA PEL	ACGIH TLV	STEL	%
Lead (7439-92-1)	.05mg/m <sup>3</sup>	.15mg/m <sup>3</sup>	-	50
Tin (7440-31-5)	2mg/m <sup>3</sup>	2mg/m <sup>3</sup>	-	50

All chemical compounds marked with an asterisk (\*) are toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372. You must notify each person to whom this mixture of trade name product is sold. This statement must not be detached. Any copy or redistribution of this Material Safety Data Sheet shall include this statement.

### 3. PHYSICAL DATA

BOILING POINT (RANGE)	N/A
VAPOR PRESSURE PSIG @ 70°F	N/A
VAPOR DENSITY (Air = 1)	N/A
SOLUBILITY IN WATER	Insoluble
SPECIFIC GRAVITY (H <sub>2</sub> O = 1)	N/A
MELTING/FREEZING POINT	N/A
EVAPORATION RATE	Nil
APPEARANCE AND ODOR	Silver-gray metal wire, odorless

### 4. FIRE AND EXPLOSION DATA

FLASH POINT	N/A
UPPER EXPLOSIVE LIMIT (%)	N/A
LOWER EXPLOSIVE LIMIT (%)	N/A
EXTINGUISHING MEDIA	N/A
SPECIAL FIRE FIGHTING PROCEDURES	Firefighters should wear NIOSH approved positive pressure self-contained breathing apparatus and full protective clothing.
FIRE AND EXPLOSION HAZARDS	When heated to high temperatures lead emits highly toxic fumes.

### 5. HEALTH EFFECTS DATA

#### SHORT TERM EFFECTS OF EXPOSURE

ROUTE OF ENTRY.....Skin, Eyes, Ingestion, Inhalation  
**INHALATION:** Lead: Excessive overexposure may result in acute or chronic illness.  
**INGESTION:** Essentially non-hazardous at room temperature (not likely to occur).  
**SKIN:** Molten core solder will cause burns.  
**EYES:** Molten solder will cause eye burns. Dust or fume may cause irritation.  
 Molten solder alloys consisting of lead and tin do not produce significant quantities of fume below 800°F.  
**CHRONIC TOXICITY: 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. Prolonged overexposure may result in kidney and nervous system involvement. 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.  
 \*N: Overexposure to dust or fume may cause irritation of the skin and mucous membranes, and may result in a benign pneumoconiosis (stannosis).

### 5. HEALTH EFFECTS DATA (Continued)

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE.....Diseases of the blood and blood-forming organs, kidneys, nervous and possibly reproductive systems

#### FIRST AID PROCEDURES

**EYES**..... Flush with large amount of water lifting upper and lower lids occasionally. Obtain medical attention.  
**SKIN CONTACT**..... Wash exposed area with soap and water. Remove contaminated clothing.  
**INHALATION**..... If inhaled when heated to soldering temperatures, remove to fresh air. Give oxygen if breathing is difficult. Consult a physician.  
**INGESTION**..... Call physician or poison control center immediately.  
**FOR BURNS:** Eyes: Flush immediately with cool water, obtain medical aid.  
 Skin: Cool with water and obtain medical aid.

#### SPECIAL HEALTH EFFECTS

**CARCINOGEN (OSHA Guidelines):** IARC classifies lead and some lead compounds as 2B carcinogens (possibly carcinogenic to humans) California, Prop 65: \*WARNING! This product contains LEAD known to the State of California to cause birth defects and other reproductive harm.\*

### 6. REACTIVITY

**STABILITY**..... Stable  
**INCOMPATIBILITIES**..... Oxidizing agents, acids, hydrogen peroxide > 52%.  
**HAZARDOUS DECOMPOSITION PRODUCTS**..... Lead oxide (fume at high temperature).  
**HAZARDOUS POLYMERIZATION**..... Will not occur  
**HAZARDOUS POLYMERIZATION CONDITIONS**..... N/A

### 7. PRECAUTIONS FOR SAFE HANDLING AND USE

#### PROTECTIVE EQUIPMENT

**REQUIREMENTS**..... If TLV's are exceeded use appropriate MSHA/NIOSH approved respirator. Wear safety glasses, goggles. Provide eye bath near work site. Protective gloves or chemical resistant finger cots. Do not re-use contaminated finger cots. Provide sufficient mechanical (General and/or Local Exhaust) ventilation to maintain exposure levels below TLV's.  
**SPILL OR LEAK PROCEDURES**..... Solid at room temperature. If in molten state allow to cool and solidify and then scrape up.  
**WASTE DISPOSAL METHODS**..... Reclaim (recycle) solder alloy portion. Dispose of in accordance with local, state and federal regulations.  
**HANDLING & STORAGE**..... Read all container labeling. Food and drink should not be consumed or tobacco products used, nor cosmetics applied in areas where solder paste may be used. Always wash hands after handling solder paste and before eating, drinking or smoking. Keep out of reach of children.  
**OTHER PRECAUTIONS**..... Containers: Since empty containers may retain product residues (vapor, liquid, or solid) all hazard precautions must be observed. Do not take internally. For industrial use only.

### 8. ADDITIONAL INFORMATION

Use self contained breathing apparatus if TLV limits are exceeded. Do not smoke while using. Wash hands after use.  
 THE INFORMATION GIVEN AND THE RECOMMENDATIONS MADE HEREIN APPLY TO OUR PRODUCT(S) ALONE AND ARE NOT COMBINED WITH OTHER PRODUCT(S). SUCH ARE BASED ON OUR RESEARCH AND ON DATA FROM OTHER RELIABLE SOURCES AND ARE BELIEVED TO BE ACCURATE. NO GUARANTEE OF ACCURACY IS MADE. IT IS THE PURCHASER'S RESPONSIBILITY BEFORE USING ANY PRODUCT TO VERIFY THIS DATA UNDER THEIR OWN OPERATION CONDITIONS AND TO DETERMINE WHETHER THE PRODUCT IS SUITABLE FOR THEIR PURPOSES.

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