



MATERIAL SAFETY DATA SHEET

12-02-86

CHEMICAL NAME AND SYNONYM: SOLDER

CHEMICAL FAMILY: METAL ALLOY

TRADE NAME:

FORMULA: D.O.T. SHIPPING CLASS: NON-HAZARDOUS

1. PHYSICAL DATA

BOILING POINT (°F)	SEE BELOW	SPECIFIC GRAVITY (WATER=1)	7.7
VAPOR PRESSURE ()	N/A	PERCENT VOLATILE (BY VOLUME)	0
VAPOR DENSITY (AIR=1)	N/A	EVAPORATION RATE ()	N/A
SOLUBILITY IN WATER (g by vol)	0		
FLAVOR AND ODOR	GRAY METALLIC BAR, WIRE, RIBBON, ETC. WITH NO ODOR		

II. HAZARDOUS INGREDIENTS

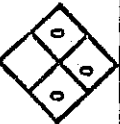
MATERIAL NAME (CAS#)	%	TLV (mg/m ³)	C.A.S. REGISTRY #
TIN	232	2270	7440-31-5
LEAD	337	1725	7439-92-1
ANTIMONY	631	1380	7440-36-0
BISMUTH	271	1560	7440-69-9
CADMIUM	321	765	7440-43-9
SILVER	961	2210	7440-22-4
NONE OF THE METAL ELEMENTS OF THIS PRODUCT ARE LISTED AS CARCINOGENIC BY IARC, IARC OR OSHA -			

THE BOILING POINT OF MOST SOLDER ALLOYS EXCEEDS 1300°C (2370°F) UNLESS THE ALLOY CONTAINS A SUBSTANTIAL AMOUNT OF CADMIUM - NO LEAD FUMES ARE GIVEN OFF AT SOLDERING TEMPERATURES BELOW 538°C (1000°F) -

III. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT ()	NONE	FLAMMABILITY LIMITS (AIR % by volume)	LOWER: N/A	UPPER: N/A
EXTINGUISHING MEDIA:	WATER	CARBON DIOXIDE	ALCOHOL FOAM	DRY CHEMICAL
SPECIAL FIRE FIGHTING PROCEDURES	SOLDER ALLOYS CONTAINING A SUBSTANTIAL AMOUNT OF CADMIUM MAY EMIT TOXIC FUMES IN A FIRE -			
UNUSUAL FIRE AND EXPLOSION HAZARDS	FLOX IN COED SOLDER WIRE OR PASTE SOLDER MAY BURN IF SOLDERING IS DONE WITH A FLAME -			

NFPA RATINGS:



The information contained herein is based on data considered accurate and given in good faith but no warranty, expressed or implied, is made.

EMERGENCY PHONE NUMBER (312) 25-1600

KESTER SOLDER
4201 WRIGHTWOOD AVENUE
CHICAGO, ILLINOIS 60639

546-11/79

IV. HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE 0.15mg/m³ FOR LEAD - ALSO SEE SECTION II -

EFFECTS OF OVER-EXPOSURE: SYMPTOMS FROM INGESTION AND INHALATION INCLUDE NAUSEA, HEADACHE, ABDOMINAL DISCOMFORT, JOINT AND MUSCLE PAIN - PRIMARY ROUTES OF ENTRY ARE INHALATION AND INGESTION - CHRONIC EFFECTS TO GASTROINTESTINAL SYSTEM, CENTRAL NERVOUS - EMERGENCY AND FIRST AID PROCEDURES, BYSTEN AND KIDNEY - EYE CONTACT: N/A

SKIN CONTACT: N/A

INHALATION: SEE INGESTION

INGESTION: IF THOUGHT TO HAVE BEEN OVER-EXPOSED, INDIVIDUAL SHOULD BE TAKEN TO A PHYSICIAN FOR EVALUATION OF BLOOD LEAD LEVEL, AND ANY GASTROINTESTINAL OR NEUROLOGICAL SYMPTOMS - V. REACTIVITY DATA EVALUATED -

STABILITY: UNSTABLE X CONDITIONS TO AVOID: NONE

STABLE X

INCOMPATIBILITY (MATERIALS TO AVOID): STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCTS: NONE

HAZARDOUS MAY OCCUR

POLYMERIZATION: WILL NOT OCCUR X

CONDITIONS TO AVOID: NONE

VI. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: N/A

WASTE DISPOSAL METHOD: DISPOSE ACCORDING TO ALL FEDERAL, STATE AND LOCAL REGULATIONS - MOST PRACTICAL APPROACH IS TO SELL EXCESS SOLDER MATERIAL TO A METALS RECLAIMER -

VII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION SPECIFY TYPE, METAL FUME AND DUST TYPE WHEN APPLICABLE -

LOCAL EXHAUST: PREFERABLE

SPECIAL: N/A

ESPECIALLY FOR FLOX FUMES

MECHANICAL (GENERAL) SATISFACTORY OTHER: N/A

OTHER: N/A

PROTECTIVE GLOVES: NOT REQUIRED

EYE PROTECTION: SAFETY GLASSES

OTHER PROTECTIVE EQUIPMENT: NONE

VIII. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: WASH HANDS THOROUGHLY WITH SOAP AND WATER BEFORE EATING, DRINKING OR SMOKING AFTER HANDLING SOLDER TO REMOVE DUST OF LEAD - ALSO REFER TO "SAFETY IN SOLDERING" BY LEAD INDUSTRIES ASSOCIATION 292 MADISON AVENUE, NEW YORK, NY 10017 -

OTHER PRECAUTIONS: USE OF STRONG ACID FUMES MAY RESULT IN THE EMISSION OF TOXIC LEAD CHLORIDE FUMES DURING SOLDERING - ALLOYS CONTAINING CADMIUM MAY EMIT CADMIUM FUMES DURING SOLDERING