



**UTILITY MANUFACTURING CO., INC.**  
 700 MAIN STREET, WESTBURY, NY 11590  
 (516) 997-6300 - FAX # (516) 997-6345

**MATERIAL SAFETY DATA SHEET**

**BIO-SAFE SOLDER PAK**

**FOR CHEMICAL EMERGENCY:** Spill, Leak, Fire, Exposure, or Accident - Call **CHEMTREC** - Day or Night: **1-800-424-9300**  
**THIS MSDS COMPLIES WITH 29 CFR 1910.1200** (HAZARD COMMUNICATION STANDARD) **IMPORTANT:** Read this MSDS before handling & disposing of this product. Pass this information on to employees, customers and users of this product.

**PRODUCT IDENTIFICATION**

**NOTE:** This MSDS covers a combination package containing Solder And Flux. Unless otherwise specified, the information pertains to all components of Bio-Safe Solder Paks

**DOT Shipping name:** CONSUMER COMMODITY, ORM-D

**Chemical Family:** FLUX: CHLORIDE  
 SOLDER: METALS

**DOT Hazard Class:** N/R

**DATE OF ISSUE:** 4/08

**SECTION I - HAZARDOUS INGREDIENTS/EXPOSURE LIMITS**

Hazardous Ingredients:	CAS #	TLV/PEL	AGENCY	TYPE	SARA-313(% Range)
FLUX - ZINC CHLORIDE	7646-85-7	1 MG/M3		ACGIH	TWA 40-50
SOLDER - TIN	7440-31-5	2.0		ACGIH	not listed
SOLDER - ANTIMONY	7440-36-0	.5		ACGIH	5

**SECTION II - EMERGENCY AND FIRST AID PROCEDURES**

**WARNING:** FLUX - CORROSIVE

**EYE CONTACT:** If product is splashed into eyes, flush eyes with clean water for at least 15 minutes and **seek medical attention.**

**SKIN CONTACT: FLUX & SOLDER:** Remove contaminated shoes and clothing and cleanse affected areas thoroughly by washing with mild soap and water and **seek medical attention.** **SOLDER:** If burns should occur from molten metal, treat for burn and get immediate medical assistance.

**INHALATION: (breathing)** remove from exposure and seek medical attention.

**INGESTION: (swallowing)** If swallowed, **seek emergency medical attention.** Do not induce vomiting. Offer victim water or milk. Do not give diluents to someone who is unconscious or having trouble swallowing.

**SECTION III - HEALTH HAZARDS / ROUTES OF ENTRY**

**EYE CONTACT:** Flush eyes with water for 15 minutes. Seek medical attention. Eye contact with one or more components of this product can lead to conjunctivitis and corneal burns.

**SKIN CONTACT:** Contact with the skin can lead to severe burns or dermatitis and ulceration depending on duration of exposure.

**SKIN ABSORPTION:** Components of this product are not known to be skin-absorbing agents.

**INHALATION: (breathing)** Not expected to be a hazard under normal operating conditions.

**INGESTION: (swallowing)** Ingestion can lead to stomach pains, nausea, vomiting, bloody diarrhea, edema, albuminuria, and shock.

**ACUTE OVEREXPOSURE: (SOLDER):** Severe short-term over exposure may lead to central nervous system disorders, characterized by fever, body aches and chills. It should be recognized that exposure of this magnitude in an industrial environment is extremely unlikely.

**CHRONIC OVEREXPOSURE:** Prolonged exposure to fumes of molten metal or flux used during soldering operation may cause irritation of the respiratory tract.

**MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE:** The symptoms of impaired pulmonary functions or illness may be worsened by fume irritants.

**SECTION IV - SPECIAL PROTECTION INFORMATION**

**VENTILATION:** Use with adequate ventilation to maintain airborne concentrations below established exposure limits (see section I); Additional ventilation or exhaust systems may be required.

**RESPIRATORY PROTECTION:** Use NIOSH/MSHA approved respirator or air supplied respirator when soldering in a confined space or where local exhaust or ventilation does not keep exposure below TLV.

**PROTECTIVE GLOVES:** The use of gloves impermeable to the specific material handled is advised to prevent possible irritation.

**EYE PROTECTION:** Approved eye protection to safeguard against potential eye contact, irritation or injury is recommended.

**SECTION V - REACTIVITY DATA**

**STABILITY:** Stable

**INCOMPATIBILITY:** (materials to avoid) **FLUX:** This product is incompatible with: Oxidizing agents, strong acids and bases potassium, bromine pentafluoride, nitrogen trioxide, hydrogen cyanide, iodine pentafluoride and potassium chlorate.

**SOLDER:** Avoid strong acids, sulfur and chlorine.



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**HAZARDOUS DECOMPOSITION PRODUCTS:** **FLUX:** Thermal decomposition in the presence of air may yield carbon monoxide, carbon dioxide. **SOLDER:** Reaction with strong acids can produce toxic organic or inorganic tin compounds.  
**HAZARDOUS POLYMERIZATION:** Will not occur

**SECTION VI - SPILL OR LEAK PROCEDURES**

**PRECAUTIONS IN CASE OF LEAK OR SPILL:** Keep all sources of ignition and hot metal surfaces away from spill/release. Stay upwind and away from spill/release. Isolate hazard area and limit entry to emergency crew only. Stop spill/release if it can be done without risk. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section IV). Prevent spilled material from entering sewers, storm drains, and natural waterways. Dike far ahead of spill for later recovery and disposal. Spilled material may be absorbed by an appropriate absorbent. Notify fire authorities and appropriate federal, state, and local agencies. If spill/release is excess of EPA reportable quantity, immediately notify the **National Response Center**. Phone **800-424-8802**  
**WASTE DISPOSAL METHOD:** Dispose of product in accordance with local, county, state, and federal regulations.

**SECTION VII - STORAGE AND SPECIAL PRECAUTIONS**

**HANDLING AND STORAGE PRECAUTIONS:** **FLUX:** Avoid getting this product ON YOU or IN YOU. Wash hands after handling this product. Do not eat or drink while handling this product. Store product in properly labeled, closed containers. Always use this product in areas where adequate ventilation is provided.  
**SOLDER:** overheating of alloy can produce metal fumes and oxides. Machining operations such as grinding, sawing or buffing can generate airborne particulates in the work area. Exposure levels indicated in section 1 are relevant to these and other operations.

**SECTION VIII - FIRE AND EXPLOSION HAZARD DATA**

**EXTINGUISHING MEDIA:** Extinguish with dry chemical, CO<sub>2</sub>, or universal type foam.  
**FIRE AND EXPLOSION HAZARD:** May decompose during contact with flames, heating elements, or in combustion engines releasing irritating gases. Container may explode if heated due to resulting pressure rise.  
**FIRE FIGHTING PROCEDURES:** Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section IV). Stop spill/release if it can be done without risk. Water spray may be useful in minimizing or dispersing vapors and cooling equipment exposed to heat and flame. Avoid spreading burning liquid with water used for cooling purposes.

**SECTION IX - PHYSICAL DATA**

**FLUX**  
 APPROXIMATE BOILING POINT (DEG F): >200  
 SPECIFIC GRAVITY (68 F): >1  
 RELATIVE EVAPORATION RATE (ESTIMATED): <1  
 VAPOR PRESSURE @20C mmHg (CALCULATED): <1  
 PERCENT VOLATILE: NONE  
 FLASH POINT (TCC, DEG F): >300  
 PERCENT SOLUBILITY IN WATER: NEGLIGIBLE

**SOLDER**  
 APPROXIMATE BOILING POINT (DEG C): <1700 Deg. C  
 SPECIFIC GRAVITY: 7.9  
 EVAPORATION RATE: N/A  
 VAPOR PRESSURE: N/A  
 VAPOR DENSITY: N/A  
 MELTING POINT: 460 DEG F  
 PERCENT VOLATILE: None  
 FLASH POINT: N/A  
 SOLUBILITY IN WATER: INSOLUBLE

**SECTION X - OTHER REGULATORY DATA**

<b>SARA</b>	<b>SECTION 302:</b> NONE <b>SECTION 311 &amp; 312:</b> ACUTE <b>SECTION 313:</b> See Section I.I	<b>HMIS</b>	Health: 1 Flammability: 0 Reactivity: 0
<b>TSCA</b>	All components are in full compliance with the TSCA inventory.	<b>CALIFORNIA PROPOSITION 65</b>	NOT LISTED
<b>RCRA</b>	Waste material would be a D002	<b>CERCLA</b>	ZINC CHLORIDE RQ: 1000 LBS.

**CARCINOGENICITY:**  
 NOT LISTED with NTP or IARC.



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NOTICE

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