

MATERIAL SAFETY DATA SHEET

SECTION I

Chemical Name and Synonyms: Brazing Paste  
 Product Name: ProTech™ C/S Low Fusing Post Solder  
 Product Code: CSS11

Distributor: ProTech Professional Products, Inc.  
 Address: 6421 Congress Avenue, Suite 102, Boca Raton, FL 33487  
 For Information Call: U.S. & Canada 1-800-872-8898, 1-407-241-0400 Elsewhere

SECTION II - HAZARDOUS INGREDIENTS OF MIXTURES

PRINCIPAL HAZARDOUS COMPONENT (S)	%	TLV (UNITS)
Hexylene Glycol		25 PPM
Silver	36.0%	0.01 mg/m <sup>3</sup>
Copper	18.0%	0.10 mg/m <sup>3</sup>
Tin	6.0%	2.00 mg/m <sup>3</sup>

HAZARDOUS MIXTURES OF OTHER MATERIALS	%	TLV (UNITS)
Potassium Bifluoride		2.50 mg/m <sup>3</sup>
Potassium Fluoborate		2.50 mg/m <sup>3</sup>

SECTION III - PHYSICAL DATA

Boiling Point: Deg. F. / mm Hg: 386 /  
 Vapor Pressure: mm Hg @ 20 Deg. C. / Specific Gravity (H<sub>2</sub>O=1):  
 Vapor Density (AIR=1): 4.1 / Percent Volatile W/W: NIL  
 Solubility in Water: Partially / Evaporation Rate (BuAc =1): 0.003  
 Appearance and Odor:

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point, Tag Closed, Deg. F.: 209 / Flammable Limit, Air Vol% Lower: 1.2  
 Upper: 8.1  
 Extinguisher Method:  
 Use carbon dioxide or dry chemical or polymer foam for large fires  
 Special Fire Fighting Procedures:  
 Firefighters should wear self-contained breathing apparatus and full protective clothing.  
 Unusual Fire and Explosion Hazards:

SECTION VI - REACTIVITY DATA

Stability: UNSTABLE; STABLE; X  
 Stable at room temperatures. Excessive heat decomposes.

Conditions to Avoid:

Incompatibility (Materials to Avoid):  
 Acids and Alkalis

Hazardous Decomposition Products:

Hazardous Polymerization: MAY OCCUR; WILL NOT OCCUR: X  
 Conditions to Avoid:

SECTION VII - SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled:  
 Avoid contact with skin or eyes. Dilute and wash spillage with water. Avoid high temperature. Wear rubber gloves during spill clean up.

Waste Disposal Method:  
 Disposal of waste product may be subject to federal, state and local regulations. Users should review their operations in terms of applicable federal, state and local laws and regulations, then consult with appropriate regulatory agency before discharge or disposing of waste material.

SECTION VIII - SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type):  
 In confined space, use an airline respirator or hose mask NIOSH approved or self-contained  
 Ventilation:  
 If fuming, use a local exhaust  
 Protective Gloves:  
 Heat Protective/rubber  
 Eye Protection:  
 Safety goggles or full face shield  
 Other protective clothing or equipment:  
 Work/Hygienic Practices:

SECTION IX - SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing:  
 Material should be stored away from acids and alkalis, avoid contact with eyes, skin and clothing. Avoid breathing fumes. Use with adequate ventilation.  
 Other Precautions:  
 Refer to ANSI Z49.1 "Safety in Cutting and Welding"

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value (TLV) :

Tin:	2.00 mg/m <sup>3</sup>
Silver	0.01 mg/m <sup>3</sup>
Copper	0.10 mg/m <sup>3</sup>
Potassium Fluoborate	2.50 mg/m <sup>3</sup>
Potassium Bifluoride	2.00 mg/m <sup>3</sup>

Effects of Over-Exposure:  
 Fluorides are toxic if swallowed. Prolonged and continual contact may cause dermatitis. Overexposure to decomposition products on heating is toxic. The fluoride may cause hypocalcemia.

COPPER: Under normal handling and use, exposure to the solid form of copper alloy presents few health hazards. Thermal cutting, melting, machining/grinding may produce fumes or dust containing the component elements and breathing these fumes or dust may present potentially significant health hazards. The exposure levels in Section II are relevant to fumes and dust. Fumes of copper may cause metal fume fever with flu-like symptoms and may cause skin and hair discoloration, irritation of the upper respiratory track, metallic taste in mouth and nausea.

TIN:  
 Inhalation of Tin Oxide may lead to benign pneumoconiosis. Certain tin salts are mild irritants to the skin and mucous membranes. Emergency first aid treatment - If molten, treat as burn. Inhalation: remove patient from area to fresh air. Ingestion: water, vomit. Refer to physician.

Medical Conditions Aggravated by Exposure:

Emergency and First Aid Procedures:  
 Inhalation: Immediately remove to fresh air. If breathing is difficult, give oxygen if a qualified operator is available. If not breathing, give artificial respiration. Call a physician and give supportive treatment.  
 Eyes: Flush eyes with water for 15 minutes. Call physician.  
 Skin: Wash skin with water. Call physician.  
 Ingestion:  
 Burn:

Carcinogenicity NTP? IARC Monographs? OSHA Regulated?

DEFINITIONS

These definitions are intended for use with the Material Safety Data Sheets supplied by ProTech Professional Products, Inc.

SECTION I - PRODUCT IDENTIFICATION

CHEMICAL NAME: General or generic identification.  
 PRODUCT CODE: The sales code for the product which should be used in all references to the product.

SECTION II - HAZARDOUS COMPONENTS

A hazardous ingredient is one which meets one or more of the following criteria:

- Listed in the annual registry of toxic effects of chemical substances, or is known to be toxic within the parameters of that registry, and/or
- Has an OSHA established, 8 hr. time-weighted average permissible exposure limit (PEL), or acceptable ceiling (C), or an American Conference of Governmental Industrial Hygienists (ACGIH) threshold limit value (TLV), and by nature of the product or its known use, it is likely to become airborne, and/or
- It contributes to one or more of the following hazards of the product:
  - Flashpoint below 93 deg. C (CC), or subject to spontaneous heating or decomposition.
  - Causes skin burns. (DOT)
  - Strong oxidizing agent. (DOT)
  - Subject to hazardous polymerization.

Each ingredient meeting one or more of the above criteria is listed in section II if present at a level at least greater than one percent. Ingredients which are claimed to be carcinogens, teratogens, mutagens, or causative agents of other reproductive disorders are listed if known or believed to be present, provided that the data supporting such claims is considered valid.

Each hazardous ingredient is listed by chemical, generic or proprietary name. It's level in the product is expressed as 1% or less, 1-10%, 10-30%, 30-60% or greater than 60% or by other means.

SECTION III - PHYSICAL DATA

INITIAL BOILING POINT: If liquid at 20 Deg. C. and is given in Deg. C. at 760 mm of Hg.  
 VAPOR PRESSURE: If liquid at 20 Deg. C. or if sublimes.  
 SPECIFIC GRAVITY: If not known, it is indicated as <1, =1, or >1.  
 PERCENT VOLATILES: Percent of material with initial boiling point below 220 Deg. C.  
 EVAPORATION RATE: Indicated with reference to Butyl Acetate, unless stated.