

MATERIAL SAFETY DATA SHEET

SECTION V - HEALTH HAZARD DATA

SECTION I

Chemical Name and Synonyms: Brazing Paste
 Product Name: ProTech™ G/D Gold Low Heat Post Solder
 Product Code: CS812

Distributor: ProTech Professional Products, Inc.
 Address: 2800 N.W. Commerce Park Dr., #10, Boynton Beach, FL 33428
 For Information Call: 1-800-872-8888, outside US & Canada call 1-581-493-9818

SECTION II - HAZARDOUS INGREDIENTS OF MIXTURES

PRINCIPAL HAZARDOUS COMPONENT (C)	%	TLV (UNITS)
Ethylene Glycol		25 PPM
Copper	39.6%	0.01 mg/m ³
Silver	12.6%	0.10 mg/m ³
Zinc	16.8%	5.00 mg/m ³
Lead	6.4%	1.00 mg/m ³

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

SECTION III - PHYSICAL DATA

Boiling Point: Deg. F. / mm Hg: 386 / Specific Gravity (H₂O=1):
 Vapor Pressure: mm Hg @ 20 Deg. C. Percent Volatile W/WX: NIL
 Vapor Density (AIR=1): 4.1 Evaporation Rate (DuAC =1): 0.0032
 Solubility in Water: Partially
 Appearance and Odors:

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 Methods:
 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:

Threshold Limit Value (TLV):

Nickel	1.00 mg/m ³
Silver	0.01 mg/m ³
Copper	0.10 mg/m ³
Zinc	5.00 mg/m ³
Potassium Fluoborate	2.50 mg/m ³
Potassium Bifluoride	2.00 mg/m ³

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 hypocalcaemia.

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.

ZINC: Excessive inhalation of freshly formed zinc may produce characteristic symptoms known as metal fume fever or zinc shakes. Onset of symptoms may be delayed 4 to 12 hours. Symptoms include irritation of the nose, mouth, and throat. Cough, stomach pain, headache, nausea, vomiting, metallic taste, chills, fever, pains in the muscles and joints. Thirst, bronchitis or pneumonia and a blushing tint to the skin. These symptoms go away in 24 to 48 hours and leave no effect.

NICKEL: Short term exposure can cause lung irritation, shortness of breath, coughing, wheezing. Long term exposure may result in impairment of sense of smell, chest pain, destruction of nasal tissue, and asthmatic lung disease. Allergic sensitivity may also develop. Nickel has been identified as a potential cancer causing agent.

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:
 Burns:

Carcinogenicity NTP? IARC Monographs? OSHA Regulated?
 NICKEL is identified as a potential cancer causing agent.

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 Methods:

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 fusing, use a local exhaust

Protective Gloves:
 Heat Protective/rubber Eye Protections:
 Safety goggles or full face shield
 Other protective clothing or equipment:

Sanitary/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"

DEFINITIONS (CONTINUED)

SECTION IV - PRODUCT IDENTIFICATION

FLASH POINT : Closed cup, TAG

LOWER EXPLOSION LIMIT : Indicated component with lowest value.

HAZARDOUS DECOMPOSITION PRODUCTS : Known hazardous products resulting from heating, burning, etc., or reactive materials which may arise from heating, burning, etc.

SPECIAL FIREFIGHTING PROCEDURES : Indicates equipment to protect firemen from toxic procedures of combustion or if water is not to be used.

UNUSUAL FIRE AND EXPLOSION HAZARDS : Hazards not covered by other sections of this report are shown here.

SECTION V - HEALTH HAZARD DATA

Recipients of this data sheet should consult the OSHA safety and health standards (29 CFR 1910) particularly sub-part G - occupational health and environmental control and sub-part I - personal protective equipment, for general guidance on control of potential occupational health hazards.

PERMISSIBLE EXPOSURE LEVEL : OSHA established PEL - if none available, adopted value.

EFFECTS OF OVEREXPOSURE : Given in general terms; local and systemic effects to the eyes, skin, if material is inhaled, unless not applicable due to physical form of product.

ABBREVIATIONS USED IN MSDS

NA = Not Applicable
NC = Not Established
NR = Not Required

NOTICE

All information, recommendations, and suggestions appearing herein concerning this product are based upon data obtained from the manufacturer and/or recognized technical sources; however, ProTech Professional Products, Inc. makes no warranty, representation or guaranty as to the accuracy, sufficiency or completeness of the material set forth herein. It is the user's responsibility to determine the safety, toxicity and suitability of his own use, handling and disposal of the product. Additional product literature may be available upon request since actual use by others is beyond our control, no warranty, express or implied, is made by ProTech Professional Products, Inc. as to the effects of such use, the results to be obtained or the safety and toxicity of the product, nor does ProTech Professional Products, Inc. assume any liability arising out of use by others of the product referred to herein. The data in this Material Safety Data Sheet relate only to the specific material designated herein and does not relate to use in combination with any other material or in any process.