Material Safety Data Sheet

May be used to comply with
OSHA's Hazard Communication Standard,
29 CFR 1910.1200. This Standard must be
consulted for specific requirements.

U.S. Department of Labor

Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

IDENTITY *(As Used on Label and List)*	Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.
Bernzomatic Lead-Free Silver Bearing Solder; Tin/Copper/Silver Rosin Core Solder Alloys (TCI-107-2)	

Section I

Manufacturer's Name	Emergency Telephone Number
BernzOmatic	800-654-9011
Address *(Number, Street, City, State, and ZIP Code)*	Telephone Number for Information
	800-424-9300
1 Bernzomatic Drive	Date Prepared
	June 11, 2011
Medina, NY 14103	Signature of Preparer *(optional)*

Section II - Hazard Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	US OSHA PEL	ACGIH TLV	APPROX. VOL. % (*1)	% WT. (*2)
Solder			97.0	
Tin (CAS No. 7440-31-5)	2.0 mg/m3	2.0 mg/m3		Balance
Copper (dust) (CAS No. 7440-50-8)	1.0 mg/m3	1.0 mg/m3		3.0-4.0
(fume)	0.1 mg/m3	0.2 mg/m3		
Silver (CAS No. 7440-22-4)	0.01 mg/m3	0.1 mg/m3		<1.0
Core			2.0-2.5 (*3)	
Rosin (CAS No. 65997-06-0)	0.1 mg/m3 (*4)	0.2 mg/m3 (*4)	2.5	1.0-6.0

Notes: *1-Product formulation is to customer specification and appears on product packaging or packing slip.

*2-Product weight formulation is to customer specification and appears on product packaging or packing slip.

*3-Remaining constituents, by volume, are inert or constitute less than the declaratory reporting threshold.

*4-Aliphatic Aldehydes, measured as formaldehyde (CAS #50-00-0; RTECS #LP89250000), best indicator of rosin pyrolysis products.

Section III - Physical/Chemical Characteristics

Boiling Point:	Information not available	Specific Gravity (H_2O = 1):	Information not available
Vapor Pressure (mm Hg.):	Not Volatile	Melting Point:	227-250 (441-482 °F)
Vapor Density (AIR = 1):	Not Volatile	Evaporation Rate (Butyl Acetate = 1):	Not Applicable
Solubility in Water: Insoluble			
Appearance and Odor (At Normal Conditions): Solid – Silver to silver gray metal. Contains core of light yellow color with rosin odor.			

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used): Non-Flammable	Flammable Limits: Not Applicable	LEL Not Applicable	UEL Not Applicable
Extinguishing Media:			
No specific agents available			
Special Fire Fighting Procedures:			
If involved in fire, use full protective clothing and NIOSH/MSHA approved self-contained breathing apparatus operated in a positive-pressure mode.			
Unusual Fire and Explosion Hazards:			
The solid metal form is not a fire hazard. However, dust generated from processing operations may present a moderate fire or explosion hazard.			

Section V - Reactivity Data

Stability:	Unstable	NO	Conditions to Avoid:
	Stable	X	N/A
Incompatibility *(Materials to Avoid):* Chlorine, Turpentine, and Magnesium, and Acetylene Gas.			
Hazardous Decomposition or Byproducts: At temperatures above the melting point metal oxide fumes may be evolved.			
Hazardous Polymerization:	May Occur	NO	Conditions to Avoid:
	Will Not Occur	X	N/A

Section VI - Health Hazard Data

Route(s) of Entry:	Inhalation? Dust/fume inhalation	Skin? NO	Ingestion? Dust ingestion
Health Hazards *(Acute and Chronic):* Note: Exposure to the solid form of this product presents few health hazards in itself. However, normal handling or processing of this material may result in exposure to product compounds and/or decomposition products, which may present a potential health hazard.			
Chronic (prolonged) overexposure to **tin** can result in benign pneumoconiosis (stannous). This form of pneumoconiosis produces progressive x-ray changes of the lungs as long as exposure exists, but there is no distinctive fibrosis, no evidence of disability and no special complicating factors.			
Acute (severe short-term) overexposure to **tin** can cause irritation of the eyes, skin, mucous membranes and respiratory system. Acute overexposure to **Copper** can cause irritation of the eyes, nose throat, and skin, and under severe fume overexposure may cause metal fume fever with flu-like symptoms such as sweet metal taste, dry throat, coughing, fever and chills, tight chest, dyspnea, headache, blurred vision, back pain, nausea, vomiting, fatigue. Symptoms usually disappear within 24 hours. **Copper** may cause skin and hair discoloration. Inhalation of copper dusts may cause changes in the gums and mucous linings of the mouth, which is generally attributable to localized tissue effect rather than general toxicity. Acute overexposure to **rosin** pyrolysis products is characterized by irritation of the eyes, nose, throat, and cough.			
Carcinogenicity:	NTP? Not listed as a carcinogen	IARC Monographs? Not listed as a carcinogen	OSHA Regulated? Not listed as a carcinogen
Signs and Symptoms of Exposure: **SEE HEALTH HAZARDS LISTED ABOVE**			
Medical Conditions Generally Aggravated by Exposure:			
Pre-existing conditions of the lungs; Wilson's Disease (Genetic Trait)			
Emergency and First Aid Procedures:			
Skin: Normal hygiene and first aid procedures - wash with soap and water. If irritation develops or persists get medical attention. Eyes: Flush well with running water to remove particulate. If irritation persists obtain medical attention. Acute Inhalation: Remove from exposure. Obtain immediate medical attention. If breathing has stopped, initiate Artificial Resuscitation. Ingestion: Give water; induce vomiting only in a conscious non-convulsing individual; obtain immediate medical attention.			

Section VII - Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled
1. Material in dust form-minimize exposure. Clean up using dustless methods (i.e. HEPA Vacuum). Do not use compressed air. 2. Place in closed labeled containers for recycling or disposal. 3. Keep out of waterways. **NOTE: Cleanup personnel should wear protective clothing and respiratory protection where dust/fume exposure exists.**
OTHER PROCEDURES: We recommend that the purchaser establish a spill prevention, control and counter measure plan. This plan should include procedures for proper storage as well as clean

	up of spills or leaks. The procedures should conform to safe practices and provide for proper recovery and/or disposal. Depending on the quantity spilled, notification to the U.S. National Response Center (800-424-8802) may be required in case of hazardous substances (see USEPA and USDOT regulations & various states and local regulations)
Waste Disposal Method:	
	May have value on a recycled basis. If disposed of, dispose of in a permitted disposal site in accordance with all federal, state and local disposal or discharge regulations.
Precautions to Be taken in Handling and Storing:	
	Practice good housekeeping procedures to prevent dust accumulations. Keep material dry. Avoid storage near incompatible materials (See Section V). Keep product away from children and their environment, feed products, food products and domestic animals.
Other Precautions:	
	Special attention is drawn to the requirements of the U.S. Respirator Standard (1910.134) should airborne exposures exceed the U.S. OSHA PEL. Inadvertent contaminants to product such as moisture, ice, snow, grease or oil can cause an explosion when charged to a molten metal bath or melting furnace (Preheating metal will remove moisture from product).

Section VIII - Control Measures

Respiratory Protection *(Specify Type):*	Respiratory protection is required where airborne exposures exceed US-OSHA/ACGIH permissible air concentrations. Respirator selection shall be made in accordance with the US OSHA Respiratory Protection Standard, 29CFR 1910.134.
Ventilation:	
	Good general dilution ventilation, or ventilation, as described in "Industrial Ventilation, A Manual of Recommended Practice", by the American Conference of Governmental Industrial Hygienists, is recommended to maintain exposure levels below the permissible exposure limits (PEL's) or Threshold Limit Values (TLV's) specified by U.S. OSHA or other local or state regulations.
Protective Gloves: Recommended for prolonged contact/heat. Required above the lead PEL.	Eye Protection: Safety glasses or goggles are recommended where the possibility exists of getting dust particles in the eyes. Safety glasses or goggles with face shield are recommended around molten metal.
Other Protective Clothing or Equipment:	
	Full protective clothing and shoes are required for employee exposure above the Lead PEL. Other safety equipment should be worn as appropriate for the work environment. Keep work clothing separate from street clothes.
Work/Hygienic Practices:	
	Do not permit eating, drinking, or the use of cosmetics or tobacco products while handling or processing material or in product work areas. Practice good personal hygiene procedures. Wash hands and face thoroughly before eating, drinking, applying cosmetics or using tobacco products. Full protective clothing is required to worn by workers exposed to concentrations of lead/dust fume above the PEL, and showering is required before changing into street clothes. Work clothes and equipment should remain in designated product use areas. Avoid inhalation and ingestion of product, and activities which generate dust or fume. Keep melting/soldering temperatures as low as possible to minimize the generation of fume.

Section IX - Special Precautions

Precautions to be taken in Handling and Storing: None
Other Precautions: None

Section X – United States SARA Title III Information

This product/mixture contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of title III of the U.S. Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372. The percent by weight of each toxic chemical and its associated chemical abstract system (CAS) number are to found in Section II of this Material Safety Data Sheet.

CHEMICAL NAME	EHS RQ (LBS) *1	EHS TPQ (LBS) *2	SEC.313 *3	313 CATEGORY *4	311/312 CATEGORY *5
Copper	Not Applicable	Not Applicable	YES	Copper	H-1

-FOOTNOTES-

*1= Reportable quantity of extremely hazardous substance, Section 302.

*2= Threshold planning quantity, extremely hazardous substance, Section 302.

*3= Toxic chemical list, Section 313

*4= Chemical category as required by Section 313 (40 CFR 372.42). Subject to annual release reporting requirements.

*5= Hazard category for SARA Section 311/312 reporting:

Health	H-1=Immediate (ACUTE) Health Hazard	Physical P-3= Fire Hazard
	H-2=Delayed (CHRONIC) Health Hazard	P-4= Sudden Release of Pressure Hazard
		P-5= Reactive Hazard

Section XI – United States CERCLA Section 103 Information

This product/mixture contains the following chemicals subject to the release reporting of Section 302.

CHEMICAL NAME	RQ (LBS)
COPPER	5000 (*1)

-FOOTNOTES-

*1= Reportable quantity (RQ) under CERCLA Section 302. Spills to the environment exceeding the reportable quantity in any 24-hour period must be reported to the U.S. National Response Center (800) 424-8802. No reporting of releases of the hazardous substance(s) is required if the diameter of the pieces of the solid metal(s) released is equal to or exceeds 100 micrometers (0.004 inches).

Section XII - Transportation Information

Proper Shipping Name:	Non-regulated material
Technical Name:	N/A
Hazard Class:	N/A
UN No.:	N/A
Packing Group:	N/A
Emergency Response Guide No.:	N/A
Other:	N/A

Section XIII – Additional Information

VOC CONTENT: NONE

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