MATERIAL SAFETY DATA SHEET **CODE: M/L 042**

This Material Safety Data Sheet complies with
the U.S. OSHA Hazard Communication
Standard, 29 CFR 1910.1200

PRODUCT: TIN/COPPER SOLDER ALLOYS; TIN/COPPER/SILVER (<1% Silver Content) ALLOYS

COMMON NAME OR SYNONYMS: Tin/Copper formulation, or, Tin/Copper/Silver formulation (<1% silver content) solders or alloys in the following forms: wire, ingot, pig, cake, rod, anodes, cast or extruded and ribbon.

INCLUDES TRADE NAME PRODUCTS: LENOX® Silver, LENOX® w/AG Bearing Alloy

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NFPA/HMIS HAZARD CODES: HEALTH: 1/1 FIRE: 0/0 REACTIVITY: 0/0 SPECIAL: N/A

0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

SECTION I

MANUFACTURER NAME: LENOX®
1690 Lowery Street
Winston-Salem, NC 27101

ISSUE DATE: October, 2007

INFORMATION PHONE: 336-777-8600

SECTION II HAZARDOUS INGREDIENTS

INGREDIENT	CAS NO.	US-NIOSH RTECS NO.	US OSHA AL	US OSHA PEL	ACGIH TLV	WT. PERCENT
Tin	7440-31-5	XP7320000	NE	2.0mg/m3	2.0mg/m3	Balance
Copper (dust)	7440-50-8	GL5325000	NE	1.0 mg/m3	1.0 mg/mg3	1.0-10.0
(fume)				0.1 mg/m3	0.2 mg/m3	
Silver	7440-22-4	VW3500000	NE	0.01 mg/m3	0.1 mg/m3	<1.0

NE = NONE ESTABLISHED AL = ACTION LEVEL PEL = PERMISSIBLE EXPOSURE LIMIT TLV = THRESHOLD LIMIT VALUE

SECTION III PHYSICAL DATA

APPEARANCE & ODOR (AT NORMAL CONDITIONS): Solid - silver to silver gray metallic metal - no odor
SPECIFIC GRAVITY (H20=1): Approximately 7.38
MELTING POINT RANGE (DEGREES F): Alloy specific dependent: 227-250 (441-482 Degrees F)
BOILING POINT (DEGREES C): Information not available
SOLUBILITY IN WATER: Insoluble
PH: Not applicable

SECTION IV FIRE & EXPLOSION HAZARD DATA

FLASH POINT: Non-flammable
FLAMMABLE LIMITS: Not applicable
EXTINGUISHING MEDIA: No specific agents recommended
SPECIAL FIRE FIGHTING PROCEDURES: If involved in fire, use full protective clothing and NIOSHA/MSHA approved self-contained breathing apparatus operated in a positive-pressure mode.
UNUSUAL FIRE & EXPLOSION HAZARDS: The solid metal form is not a fire hazard. However, it is possible that dust generated from processing operations may present a moderate fire or explosion hazard.

SECTION V REACTIVITY DATA

STABILITY:	Stable
CONDITIONS TO AVOID:	Not applicable
INCOMPATIBILTY:	Chlorine, Turpentine, Magnesium, and Acetylene Gas
HAZARDOUS DECOMPOSITION PRODUCTS:	At temperatures above the melting point metal oxide fumes may be evolved.
HAZARDOUS POLYMERIZATION:	Will not occur.

SECTION VI HEALTH HAZARD DATA

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 components and/or decomposition products, which may present a potential health hazard.

ROUTES OF ENTRY: Dust/fume inhalation; dust ingestion.

SYMPTOMS & EFFECTS OF OVEREXPOSURE:

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** dust/fume can cause irritation of the eyes, skin, mucous membranes and respiratory system. Acute overexposure to **Copper** dust/fume can cause irritation of the eyes, nose, throat and skin, and under severe fume overexposure can 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 lining of the mouth which is generally attributable to localized tissue effect rather than general toxicity.

MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE: Pre-existing conditions of the lungs, Wilson's Disease (genetic trait)

CARCINOGENITY: Not listed as a carcinogen by NTP, IARC, OSHA, ACGIH

EMERGENCY & FIRST AID PROCEDURES:

SKIN:	Normal hygiene and first aid procedures - wash with soap and water. If irritation develops or persists obtain 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 PROTECTION MEASURES

RESPIRATORY PROTECTION:	Respiratory protection is required where airborne exposures exceed U.S. OSHA/ACGIH permissible air concentrations. Respirator selection shall be made in accordance with the U.S. OSHA Respiratory Protection Standard, 29 CFR 1910.134.
VENTILATION:	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.
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 EQUIPMENT:	Safety equipment should be worn as appropriate for the work environment.
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. 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 VIII PRECAUTIONS FOR SAFE HANDLING & USE

PRECAUTIONS TO BE TAKEN IN HANDLING & 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 and domestic animals.

OTHER PRECAUTIONS: Special attention is drawn to the requirements of the U.S. OSHA Respirator 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 the product).

SECTION IX SPILL OR LEAK PROCEDURES

SPILL OR LEAK PROCEDURES:
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 significant dust/fume exposure exists.

OTHER PROCEDURES: For large product users or involving large product quantities, 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: also various state and local regulations.)

WASTE DISPOSAL METHODS: 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

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 and40 CFR Part 372. The percent by weight of each toxic chemical and its associated chemical abstract system (CAS) number are to be 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, 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; H-2 = Delayed (CHRONIC) Health Hazard

Physical: P-3 = Fire 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 requirements 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 as shipped
TECHNICAL NAME:	N/A
HAZARD CLASS:	N/A
UN NO.:	N/A
PACKING GROUP:	N/A
EMERGENCY RESPONSE GUIDE NUMBER:	N/A
OTHER:	N/A

SECTION XIII ADDITIONAL INFORMATION

VOC CONTENT: None

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