# MATERIAL SAFETY DATA SHEET

Complies with OSHA Hazard Communication Standard 29CFR 1910.1200

Rev. 10/03/11

## **LEAD-FREE ALLOY**

Tin-Silver-Copper Alloys Rosin Core

BOW ELECTRONIC SOLDERS 1 CROSSMAN ROAD SAYREVILLE, NJ 08872

Phone No. 732-316-2100 Infotrac Emergency No.: 1-800-535-5053

### 1. PRODUCT INGREDIENTS

Chemical Name	CAS No.	Weight %	Permissible Air (Concen.(mg/cu.m.) OSHA ACGIH	SARA Title III Sect.313Chem
TIN	7440-31-5	>95%	2.0 2.0	NO
COPPER	7440-50-8	<1%	.1 .2	NO
SILVER	7440-22-4	<4%	.1 .1	NO
ROSIN	8050-09-7	1-3	N/A N/A	NO

### 2. PHYSICAL DATA

Material is SOLID

**Appearance and Odor** 

SILVER-WHITE METAL, CORE HAS LIGHT ROSIN ODOR.

Melting Point APPROX. 430°F CORE 250°F Boiling Point <4000°F

Specific Gravity APPROX. 7.1

**Vapor Density** 

1 1

Solubility in Water INSOLUBLE

Vapor Pressure

**Evaporation Rate** 

N/A

PH N/A

N/A

## 3. FIRE AND EXPLOSION DATA

**Flash Point** 

**Flammable Limits** 

- 0

**Auto Ignition Temp.** 

N/A CORE 300°F N/A N/A

N/A

N/A N/A

**Unusual Fire and Explosion Hazards** 

**OTHER** 

IN EXTREMELY HIGH TEMPERATURE FIRE OR IN CONTACT WITH CERTAIN ACIDS, MAY EMIT TOXIC FUMES. USE SELF-CONTAINED RESPIRATORY SYSTEM.

Fire Extinguishing Agents Recommended USE CO2 OR DRY CHEMICAL ON SURROUNDING FIRE

NFPA CODES: HEALTH

HEALTH - 1 FLAMMABILITY - 0 REACTIVITY - 0 HMIS CODES: HEALTH

HEALTH

FLAMMABILITY - 0 REACTIVITY - 0 OTHER - 0

OTHER

Item Numbers: 60603-1009

#### 4. HEALTH HAZARD INFORMATION

Primary Route of Entry
X INHALATION

ABSORPTION

Carcinogenecity

THIS PRODUCT HAS NOT BEEN LISTED AS A SUSPECT CARCINOGEN BY NTP, IARC OR OSHA. THIS PRODUCT CONTAINS LESS THAN .02% LEAD.

Acute Overexposure(symptoms and effects)

SEVERE SHORT-TERM OVEREXPOSURE MAY LEAD TO CENTRAL NERVOUS SYSTEM DISORDERS, CHARACTERIZED BY FEVER, BODYACHE AND CHILLS. IT SHOULD BE RECOGNIZED THAT EXPOSURE OF THIS MAGNITUDE IN AN INDUSTRIAL ENVIRONMENT IS EXTREMELY UNLIKELY.

**Chronic Overexposure(symptoms and effects)** 

PROLONGED EXPOSURE TO FUMES OF MOLTÉN METAL OR FLUX USED DURING SOLDERING OPERATION MAY CAUSE IRRITATION OF THE RESPIRATORY TRACT. ROSIN IS A POTENTIAL ALLERGENIC-CAN CAUSE A RASH OR OTHER ALLERGIC REACTION TO A ROSIN SENSITIVE PERSON. CHRONIC OVEREXPOSURE TO THE FUMES FROM THE FLUX MAY CAUSE IRRITATION TO THE PULMONARY SYSTEM AND LUNG DISEASE.

**Medical Conditions Possibly Aggravated By Exposure** 

THE SYMPTOMS OF IMPAIRED PULMONARY FUNCTIONS OR ILLNESS MAY BE WORSENED BY **FUME IRRITANTS.** 

First Aid Procedures

INHALATION: REMOVE FROM EXPOSURE AND CALL A PHYSICIAN. SKIN CONTACT: WASH AFFECGTED AREAS WITH SOAP AND WATER. IF BURNS SHOULD OCCUR FROM MOLTEN METAL TREAT FOR BURN AND GET IMMEDIATE MEDICAL ASSISTANCE.

EYE CONTACT: FLUSH EYES WITH WATER FOR 15 MINUTES, CALL A PHYSICIAN. INGESTION: INGEST LARGE QUANTITIES OF WATER. CALL A PHYSICIAN.

### 5. PRECAUTIONS/PROCEDURES

OVERHEATING OF ALLOY CAN PRODUCE METAL FUMES AND OXIDES. MACHINING OPERATIONS SUCH AS GRINDING, SAWING OR BUFFING CAN GENERATE AIRBORN PARTICULATES IN THE WORK AREA. EXPOSURE LEVELS INDICATED IN SECTION 1 ARE RELAVENT TO THESE AND OTHER OPERATIONS.

Normal Handling

USE OF APPROVED RESPIRATORS IS REQUIRED FOR APPLICATIONS WHERE ADEQUATE VENTILATION CANNOT BE PROVIDED. ACTIVITIES WHICH GENERATE EXCESSIVE DUST OR **FUMES SHOULD BE AVOIDED.** 

Spill or Leak

ANY METHOD THAT KEEPS DUST TO A MINIMUM IS ACCEPTABLE. VACUUMING IS PREFERRED. USE OF APPROVED RESPIRATORY PROTECTION WHERE POSSIBLITY OF DUST/FUME EXPOSURE EXISTS. DO NOT USE COMPRESSED AIR FOR CLEANING.

**Personal Hygiene** 

AVOID INHALATION OR INGESTION. PRACTICE GOOD HOUSEKEEPING AND PERSONAL HYGIENE PROCEDURES.

**Engineering Controls** 

LOCAL EXHAUST VENTILATION IS RECOMMENDED FOR DUST AND/OR FUME GENERATION OPERATIONS WHERE AIRBORN EXPOSURES MAY EXCEED PERMISSIBLE AIR CONCENTRATIONS.

**Storage** 

GENERAL STORAGE PROCEDURES ACCEPTABLE.

#### 6. PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection
USE NIOSH/MSHA APPROVED RESPIRATORS OR AIR SUPPLIED RESPIRATOR WHEN
SOLDERING IN A CONFINED SPACE OR WHERE LOCAL EXHAUST OR VENTILATION DOES NOT
KEEP EXPOSURE BELOW TLV.

Eyes and Face SAFETY GLASSES RECOMMENDED WHERE THE POSSIBILITY OF GETTING DUST PARTICLES IN EYES EXISTS OR WHEN HANDLING MOLTEN METAL.

Other Clothing and Equipment GLOVES AND OTHER PROTECTIVE CLOTHING RECOMMENDED TO PROTECT SKIN FROM CONTACT WITH MOLTEN METAL.

#### 7. REACTIVITY DATA

Stability: STABLE

**Conditions to Avoid: NOT APPLICABLE** 

Incompatibility:

**AVOID STRONG ACIDS, SULFUR AND CHLORINE** 

Hazardous Decomposition Products: REACTION WITH STRONG ACIDS CAN PRODUCE TOXIC ORGANIC OR INORGANIC TIN COMPOUNDS.

## 8. ENVIRONMENTAL

Regulated by DOT? NO

Waste Disposal Method
TIN AS A PURE METAL AND TIN/COPPER/SILVER/ANTIMONY ALLOYS PRESENT NO PROBLEM
FOR DISPOSAL AND ARE, IN FACT, RECOVERED DUE TO THEIR ECONOMIC VALUE.

### 9. ADDITIONAL INFORMATION

Precautions to be taken in handling and storing: NONE

Other Precautions: NONE

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