



# MATERIAL SAFETY DATA SHEET

## MSDS No. 003 Lead Free Brass Pipe Fittings

**PRODUCT IDENTITY:** Brass Pipe Fittings Bismuth Tin Bronze No. C89833 **MSDS No:** 003

### SECTION 1 - Product and Company Identification

DISTRIBUTOR: Merit Brass Company MANUFACTURER: Various

EMERGENCY TELEPHONE NUMBER: 1-216-261-9800 or 1-800-726-9800

ADDRESS: One Merit Drive - P.O. Box 43127, Cleveland, Ohio 44143

TELEPHONE NUMBER FOR INFORMATION: 1-216-261-9800 or 1-800-726-9800

CHEMICAL NAME AND SYNONYMS: Brass Alloy Fittings ASTM B584-08a; Bismuth Tin Bronze C89833

COMPANY CONTACT: Thomas J. Golenski, Production Manager



### SECTION 2 - Hazardous Ingredients

| ELEMENT          | CAS NO.   | % RANGE      | OSHA PEL (mg/M <sup>3</sup> )       | ACGIH TLV (mg/M <sup>3</sup> )      |
|------------------|-----------|--------------|-------------------------------------|-------------------------------------|
| Aluminum         | 7429-90-5 | .005 Max     | 5 respirable dust,<br>15 total dust | 1                                   |
| Antimony         | 7440-36-0 | .25 Max      | 0.5                                 | 0.5                                 |
| Bismuth          | 7440-69-9 | 1.70 to 2.70 | 5 respirable dust,<br>15 total dust | 3 respirable dust,<br>10 total dust |
| Copper           | 7440-50-8 | 86 to 91     | 0.1 fume,<br>1 dust                 | 0.2 fume,<br>1 dust                 |
| Iron (as oxide)  | 7439-89-6 | 0.30 Max     | 10 fume                             | 5                                   |
| Lead             | 7439-92-1 | 0.09 Max     | 0.05                                | 0.05                                |
| Nickel           | 7440-02-0 | 1 Max        | 1                                   | 1.5                                 |
| Silicon          | 7440-21-3 | .005 Max     | 5 respirable dust,<br>15 total dust | 10                                  |
| Sulfur (as dust) | 7704-34-9 | .08 Max      | 5 respirable dust,<br>15 total dust | 3 respirable dust,<br>10 total dust |
| Tin              | 7440-31-5 | 4 to 6       | 2                                   | 2                                   |
| Zinc (as oxide)  | 7440-66-6 | 2 to 6       | 5 respirable dust,<br>15 total dust | 2 fume,<br>10 total dust            |

### SECTION 3 - Physical Data

**MELTING POINT:** 1580 to 1885° F

**SPECIFIC GRAVITY:** 8.78 g/cc

**BOILING POINT:** Not Applicable

**VAPOR PRESSURE:** Not Applicable

Bronze is a shiny yellow-golden colored metallic solid, it has no odor, and is not soluble in water.

### SECTION 3 - Fire & Explosion Data

**FLASH POINT:** Not Applicable

**EXTINGUISHING MEDIA:** Water spray or ABC dry chemical

**AUTO-IGNITION TEMPERATURE:** Not Applicable

**NATIONAL FIRE PROTECTION ASSOCIATION DATA:**

**FLAMMABLE LIMITS:** LEL N/A UEL N/A

Health - 1  
Reactivity - 1

Flammability - 0  
Special - None

**SPECIAL FIRE FIGHTING PROCEDURES:** None when solid.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Do not use water on molten metal.





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### SECTION 5 - Health Hazard Data

**THRESHHOLD LIMIT VALUE:** See SECTION 2 - HAZARDOUS INGREDIENTS

**EFFECTS OF OVEREXPOSURE:** No adverse health effects when handling intact parts; wash hands before eating to prevent ingestion of minute amounts of toxic metal that may accumulate in the body. Exposure to bronze grinding dust and brazing fumes may cause the cold-like symptoms of metal fume fever; metallic taste in mouth, chills, fever, dry mouth and throat, headache. Copper fumes may cause the discoloration of skin and hair.

**EMERGENCY AND FIRST AID PROCEDURES:** In all cases seek medical assistance.

**INHALATION** - Remove person with symptoms to fresh air, thoroughly shower, and change cloths.

**INGESTION** - Seek medical assistance.

**EYE** - Flush with clean water for thirty minutes.

**SKIN** - Wash thoroughly with soap and water.

### SECTION 6 - Reactivity Data

**STABILITY:** Bronze metal is stable at room temperture.

**INCOMPATABILITY:** (Materials to avoid) Strong acids and bases.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Flammable or toxic gases may evolve when brass is exposed to acids or bases.

**HAZARDOUS POLYMERIZATION:** Will not occur.

**CONDITIONS TO AVOID:** Do not use bronzee pipe and fittings to transport corrosive liquids.

### SECTION 7 - Spill or Leak Procedures

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** Bronze parts spills should constitute only a trip and fall hazard.

**WASTE DISPOSAL METHOD:** Bronze metal is valuable and may be recycled by foundries and secondary metal smelters. Avoid melting bronze chips covered with metal cutting oil since this will cause fugative emmissions of dense smoke into the air.

### SECTION 8 - Special Protection Information

**RESPIRATORY PROTECTION:** Use a NIOSH approved HEPA respirator when melting, brazing, or grinding brass metal. *(Specify type in accordance with the concentration of toxic particles in the air and work conditions.)*

**VENTILATION:** Local exhaust ventilation is recommended when melting, brazing, or grinding bronze metal.

**EYE PROTECTION:** Wear appropriate eye protection when melting, brazing, soldering, cutting, or grinding bronze metal.

**PROTECTIVE GLOVES:** Use cotton work glove to prevent transfer of metal to skin. Use cut resistant gloves when handling metal chips. Use heat resistant gloves or tongs to handle hot parts.

**OTHER PROTECTIVE EQUIPMENT:** Wear clothing appropriate to the fabrication operation attempted with this product.

### SECTION 9 - Special Precautions

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:** Protect bronze parts from moisture to avoid discoloration and corrosion.

**OTHER PRECAUTIONS:** Never place wet bronze parts into a melting furnace - explosion hazard.

This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief accurate and reliable as of the date compiled. However, no representation, warrantee or guarentee is made to its accuracy, reliability, or completeness. It is the user's responsibility to satisfy themself as to the suitability or completeness of such information for their own particular use. We do not accept liability for any loss or damage that may occur from the use of this product either singly or in combination with other substances. This MSDS is equivalent to OSHA Form 20.