



**OVERVIEW (continued)**

Inhaling excessive amounts of dust from castings over a long period of time can cause anemia. The dust from this casting may also cause skin and eye irritation after short exposures.

Grinding on castings that have not been cleaned may generate significant amounts of dust containing free silica, which can cause silicosis.

Because of this potential hazard from metal dust and fumes, machining, grinding, welding operations, etc., should be done under local exhaust ventilation. If ventilation is not adequate, wear a NIOSH approved dust and fume respirator. In addition, good hygiene practices should be followed. Smoking should not be allowed in lead handling areas. Wash hands thoroughly before eating. Keep work area clean.

Other toxic metals in the alloy are present in small amounts that will not represent a hazard if copper and lead dust and fume are adequately controlled.

**SECTION III - PHYSICAL DATA**

**Physical Description :** Solid metal, yellow to red in color, no odor

Boiling Point : 4703 F (for copper)

Vapor Pressure : N/A

Vapor Density : N/A

Solubility In Water : not soluble

Specific Gravity : 8.94 (for copper)

Percent Volatile By Volume : None

Evaporation Rate : N/A

**SECTION IV - FIRE AND EXPLOSION DATA**

Castings will not burn or explode.

**SECTION V - HEALTH HAZARD DATA**

**Eyes :** Metal particles in eyes may cause irritation if not removed.

**Skin :** May cause skin irritation

**Breathing :** Breathing dust or fumes may cause nose and throat irritation. High levels of the fumes can result in a sweet or metallic taste in the mouth. Very high levels can cause metal fume fever, which resembles the flu. Breathing the dust over a long period of time can also result in anemia, kidney damage, nervous system damage and reproductive effects. Breathing excessive amounts of silica dust for a long time can cause silicosis. Silicosis causes shortness of breath, reduced capacity to do work and weakens defenses against other lung diseases.

**Swallowing :** N/A

**Noise :** Grinding castings is noisy. The OSHA limit for noise averaged over 8 hours is 90 decibels (dBA), hearing conservation program required if exposure is over 85 dBA. If noise is at or above 90 dBA you should wear ear muffs or ear plugs.

**FIRST AID**

**If In Eyes :** Metal particles should be removed by trained individuals such as a nurse or physician.

**If On Skin :** Use a mild hand cream if irritation develops.

**If Breathed :** (Fumes from welding) Move to fresh air.

**If Swallowed :** N/A

**SECTION VI - REACTIVITY DATA**

**Hazardous Polymerization :** Will not occur.

**Stability :** Stable.

**Incompatibility:** Fine castings dust and finely divided bromates, chlorates or iodates form an explosive mixture. Acetylene or ethylene oxide can react with heated casting to form explosive acetylides. Also not compatible with halogens, strong acids or strong oxidizers.

**SECTION VII - SPILL OR LEAK PROCEDURES**

**Steps to be taken in case material is released or spilled:**

If damaged, return castings to vendor or send to scrap reclaimer.

Collected dust from machining, welding, etc. may be classed as a "hazardous waste" depending on circumstances. Consult local authorities regarding disposal.

**SECTION VIII - PROTECTIVE EQUIPMENT TO BE USED**

**Respiratory Protection :** Wear a NIOSH approved respirator for dusts or fume if concentrations exceed the TLV or PEL.

**Ventilation :** Provide general ventilation and/or local exhaust if necessary to maintain concentrations below the TLVs.

**Protective Gloves :** Work gloves advisable for handling castings.

**Eye Protection :** Safety glasses with side shields and/or face shields for particles (grinding). Welding goggles or helmet for welding.

**Other Protective Equipment :** Wear a protective apron and gauntlets if arc-air gouging or cutting or welding on castings. If noise is at or above 90 dBA you should wear ear muffs or ear plugs.

**SECTION IX - SPECIAL PRECAUTIONS OR OTHER COMMENTS**

**Storage :** No special precautions.

**Information presented herein has been compiled from sources considered to be reliable and is accurate and reliable to the best of our knowledge and belief but is not guaranteed to be so.**