BUNTING BEARINGS, LLC

200 Van Buren Street * Delta, Ohio 43515 * (419) 822-3483 * Fax: (419) 822-3372

Safety Data Sheet
Bunting Continuous Cast

Revised: December 10, 2019

Meets the Requirements of OSHA Standard 29 CFR 1910.1200; Hazard Communication and EPA Supplier Notification Requirements under Section 313 of the Emergency Planning and Community Right-to-Know Act

Section 1 – Material Identification

Manufacturer: Bunting Bearings, LLC
200 Van Buren Street
Delta, Ohio 43515

Emergency Telephone Number
419-866-7000
Information Telephone Number
419-522-3323

Product Class: Cast Bronze Alloys
C83600 through C94300
Bunting M-37 through M-66

Section 2 – Hazards Identifications

GHS Classification:

Castings are metallic articles that do not present hazards in their original form.

Other Information:

1. Grinding castings that have not been cleaned or that contain embedded sand may generate significant amounts of dust containing crystalline silica.
2. Fumes from hot processes may contain other compounds with different exposure limits. Dust or fumes generated by machining, grinding, welding or thermal cutting of the casting may produce airborne contaminants. Consult Sections 3 & 8 for further information.

Section 3 – Composition/Information on Ingredients

Ingredient(s)	CAS No.	Percent
Base Metal:		
Copper	7440-50-8	65-90%
Alloys:		
Lead	7439-92-1	0.2-24.5%
Tin	7440-31-5	2-16%
Zinc	7440-66-6	0.25-10%
Nickel	7440-02-0	0.5-5.25%

Section 4 – First Aid Measures

Ingestion: If swallowed and the person is conscious, immediately give large amounts of water. Get medical attention.

Inhalation: If a person breathes in large amounts of dust of fume, move the exposed people to fresh air. Get medical attention.

Eye Contact: Immediately flush with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact: Immediately wash with plenty of soap and water.

Section 5 Fire Fighting Measures

Flash Point:	N/A	**Flammable Limits:**	**Upper:**	N/A
Method:	N/A		**Lower:**	N/A

Extinguishing Media: Solid form – None
Fine Chips/Dust – Use a dry chemical or sand

Special Fire Fighting Procedures: Protective Clothing
NIOSH-self contained breathing apparatus

Unusual Fire and Explosion Hazards: Fine chips or dust may ignite and should be stored in a well-ventilated area.

Section 6 Accidental Release Measures

No special precautions are necessary for spills of bulk materials. If large quantities of dust are spilled, remove by vacuuming or wet sweeping to prevent heavy concentrations of air borne dust. Respirators and protective clothing are recommended.

Section 7 – Handling and Storage

No special requirements. Proper hand and foot protection is recommended.

Section 8 – Exposure Controls/Personal Protection

Engineering Controls:

None Required. There are no health hazards from castings in solid form.

Supplemental Information:

Grinding castings that have not been cleaned or that contain embedded sand may generate significant amounts of dust containing crystalline silica.

Fumes from hot processes may contain other compounds with different exposure limits. Dust or fumes generated by machining, grinding, welding or thermal cutting of the casting may produce airborne contaminants. Exposure limits for the most common contaminants are offered as reference. Please consult a competent person for guidance on exposure assessment and controls.

Metals:	**OSHA PEL**	**ACGIH TLV**	
Copper	1.0 mg/m^3	1.0 mg/m^3	dust
Copper	0.1 mg/m^3	0.2 mg/m^3	fume
Alloys:			
Lead	0.05 mg/m^3	0.15 mg/m^3	
Tin	2.0 mg/m^3	2.0 mg/m^3	
Zinc	15.0 mg/m^3	10.0 mg/m^3	dust
Zinc	5.0 mg/m^3	5.0 mg/m^3	fume
Nickel	1.0 mg/m^3	1.0 mg.m^3	

Respiratory Protection: When required, employees should wear MSHA or NIOSH approved respirators for protection against airborne dust or fumes.

Ventilation: Use general or local exhaust ventilation to keep airborne concentrations of dust and fumes below the TLV.

Protective Gloves: N/A

Eye Protection: Approved safety glasses and/or goggles should be worn during any machining, grinding, cutting, or other operation from which airborne particles may be emitted.

Other Protective Clothing: N/A

Work/Hygienic Practices: Wash hands after handling materials.
Food or drink should not be consumed in the work area.
Wash hands and face prior to eating, drinking or smoking.

Section 9 – Physical and Chemical Properties

Boiling Point:	N/A	**Specific Gravity (H_2O = 1):**	7.5-9.0
Vapor Pressure:	N/A	**Melting Point:**	1500F – 1950F
Vapor Density:	0.27-0.323 l	**Evaporation Rate:**	N/A
Solubility in Water:	Insoluble		
Appearance:	Yellow to Red		
Odor:	None		

Section 10 – Stability and Reactivity

Stability: Copper alloys are stable under normal conditions of use storage and transportation.

Conditions to Avoid: Molten metal may react violently with water.
Avoid contact of chips and dust with heat, oxidizers, acids, alkali's, molten lithium and halogenated compounds.

Incompatibility: Avoid acids, bases and oxidizers.

Hazardous Polymerization: Will not occur.

Section 11 – Toxicological Information

Routes of Entry: Inhalation, Eye, Skin and Ingestion.

Copper: Under normal handling and use, exposure to the solid form of copper alloys presents few health hazards. Thermal cutting, melting, machining or grinding may produce fumes or dust containing the component elements and breathing these fumes or dust may present potentially significant health hazards. The exposure levels in Section II are relevant to fumes and dust. Fumes of copper and manganese may cause metal fume fever with flu-like symptoms, and copper may cause hair discoloration. Copper fumes and dust irritate the nose and throat. If too many fumes are inhaled, it will cause a sweet or metallic taste in the mouth. Inhaling excessive amounts of copper dust and fume over a long period of time can cause anemia.

Lead – Short Term Exposure: Lead is an accumulative poison. Inhalation effects of exposure to fumes or dust of inorganic lead may not develop quickly. Symptoms may include decreased physical fitness, fatigue, sleep disturbance, headache,

aching bones and muscles, constipation, abdominal pains and decreasing appetite. The effects are reversible and complete recovery is possible. Inhalation of large amounts of lead may lead to seizures, coma and death.

Lead – Long Term Exposure: Long-term exposure to lower levels can result in a buildup of lead in the body and more severe symptoms. Prolonged exposure may also result in kidney damage. Continuous exposure can result in decreased fertility, and exposure of the mother during pregnancy can cause birth defects.

Iron Oxide and Tin: Chronic overexposure to iron oxide or tin fumes may cause an apparent benign pneumoconiosis. In the case of iron oxide, this is called siderosis, and for tin it is called stannosis.

Zinc Oxide: Overexposure to zinc oxide fumes can cause "Metal Fume Fever".

Nickel: Under normal handling, exposure to nickel presents few health hazards. Dust may cause headache, coughing, dizziness or difficult breathing. Prolonged exposure may cause dermatitis. Ingestion may cause nausea, vomiting, headaches, dizziness, and gastrointestinal irritation.

Carcinogen: None for the alloys.
Nickel is considered a possible carcinogen by NTP and IARC.

Section 12 – Ecological Information

No special precautions are necessary for spills of bulk materials. If large quantities of dust are spilled, remove by vacuuming or wet sweeping to prevent heavy concentrations of airborne dust. Respirators and protective clothing are recommended.

Section 13 – Disposal Considerations

Follow Federal, State and local regulations regarding disposal. Scrap metals can generally be reclaimed and recycled.

Section 14 – Transportation Information

Non-dangerous product for transportation by road, sea and air. No labels are required.

Section 15 – Regulatory Information

US-OSHA (Hazard Communication Standard)

References: 29 CFR 1910.1200 Hazard Communication Standard
A finished casting is an article as defined in 29CFR 1910.1200 (c)
29 CFR 1910. 1000 Air Contaminants
29 CFR 1910. 1025 Lead

Dust or fumes generated by cleaning, machining, grinding, or welding of the casting may produce airborne contaminants, such as bismuth, cobalt, copper, lead, nickel, selenium, tin, zinc and silica.

US-EPA (Toxic Substances Control Act-TSCA)

All components of these products are on the TSCA inventory list or are excluded from listing.

US-EPA (SARA Title Ill)
Releases to the environment of Cobalt, Copper, Lead, Nickel, Selenium and Zinc (fume or dust) may be subject to reporting under Section 313 of Title Ill of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

CANADA-WHMIS (Workplace Hazardous Materials Information System)
This SDS has been prepared according to the hazard criteria of the Controlled Product Regulations (CPR) and the SDS contains the information required by the CPR.

CANADA DSL (Domestic Substances List) Inventory Status
All components of these products are on the DSL Inventory.

CEPA (Canadian Environmental Protection Act)
Lead is on the Toxic Substances List.

EINECS No. (European Inventory of Existing Commercial Chemical Substances)
All components of these products are on the EINECS list.

RoHS (Restriction of Certain Hazardous Substances) Compliance
Castings comply with RoHS

CALIFORNIA PROPOSITION 65 Compliance

WARNING: This product can expose you to chemicals including lead and nickel, which are known to the State of California to cause cancer and lead which is known to the State of California to cause birth defects or other reproductive harm. For more information, go to www.p65warning.ca.gov

US STATE REGULATORY INFORMATION
Some of the components listed in Section 3 may be covered under specific state regulations.

Section 16 – Other Information

HMIS Rating:	Lead/Copper, Health 2, Flammability 0, Reactivity 0
NFPA Rating:	Lead/Copper, Health 2, Flammability 0, Reactivity 0
Revised:	December 10, 2019

The above information is based on upstream suppliers and furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Bunting Bearings LLC. The data on these sheets relates only to the specific material designated herein. Bunting Bearings LLC assumes no legal responsibility for use or reliance upon this data.

Addendum: Label Information

PRODUCT IDENTIFIER

Cast Bronze Alloys
C83600 through C94300
Bunting M-37 through M-66

SUPPLIER IDENTIFICATION

Company Name: Bunting Bearings LLC

Street Address: 1001 Holland Park Blvd.

Mailing Address: Same as Above

City: Holland State: OH

Zip/Postal Code 43528 Country U.S.A.

Emergency Phone Number 419-866-7000

Other Info_____

HAZARD PICTOGRAMS

None*

SIGNAL WORD

None*

PRECAUTIONARY STATEMENTS

None*

HAZARD STATEMENTS

None*

*Castings do not present hazards in their original form.

OTHER INFORMATION

1. Grinding castings that have not been cleaned or that contain embedded sand may generate significant amounts of dust containing crystalline silica.

2. Fumes from hot processes may contain other compounds with different exposure limits. Dust or fumes generated by machining, grinding, welding or thermal cutting of the casting may produce airborne contaminants. Consult Sections 3 & 8 of the SDS for further information.