BUNTING BEARINGS, LLC

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

Safety Data Sheet
Copper-Tin-Lead Dross

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** 419-822-3483
Product Class:	Copper-Tin-Lead Dross & Skimming's	

Section 2 – Hazards Identifications

Physical hazards	Not Classified	
Health hazards	Sensitization, skin	Category 1
	Carcinogenicity	Category 2
	Reproductive toxicity (fertility, the unborn child)	Category 1A
	Specific target organ toxicity, repeated exposure	Category 2 (Lung, central nervous system)

OSHA hazard(s) Not classified.

Label elements

Hazard symbol

Signal word	Danger
Hazard statement	May cause an allergic skin reaction. May cause damage to organs (Lung, central nervous system) through prolonged or repeated exposure. Suspected of causing cancer. May damage fertility or the unborn child.

Precautionary statement

Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Contaminated work clothing should not be allowed out of the workplace. Do not breathe dust/fume.
Response	If on skin: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. If exposed or concerned: Get medical advice/attention. Get medical advice/attention if you feel unwell.
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)	Not classified.	
Environmental Hazards	Hazardous to the aquatic environment, long-term hazard	Category 3

Section 3 – Composition/Information on Ingredients

Ingredient(s)	CAS No.	Percent
Copper	7440-50-8	20-40%
Lead	7439-92-1	0.005-13.65%
Tin	7440-31-5	0.005-8.0%
Zinc	7440-66-6	0.005–10.4%
Nickel	7440-02-0	0.005–12.8%

Section 4 – First Aid Measures

Routes of Entry: Inhalation, eyes and Skin

Ingestion: Ingestion of significant amounts of material is unlikely. If swallowed and the person is conscious, induce vomiting immediately and get medical attention immediately.

Inhalation: Melting may produce dusts or fumes containing the component elements and their oxides. Breathing these dust or fumes may present potentially significant health hazards. These may include mucous membrane irritation and lung changes in worker, potentially leading to pulmonary diseases. If wet material will release toxic gases.

Inhalation of finely divided aluminum powder may cause pulmonary fibrosis (aluminosis). Symptoms include anorexia, shortness of breath, dry cough, chest pain on respiration and epigastric abdominal pain.

Fumes of copper, magnesium, manganese and zinc oxide may cause metal fumes fever with flu-like symptoms. Overexposure to manganese fumes may cause chronic manganese poisoning. Early symptoms include headaches, apathy, sleepiness and weakness or cramps in the legs. Chronic overexposure may affect the central nervous system, ultimately leading to emotional disturbances, gait and balance difficulties, and paralysis.

When heated to 2012^{o}F sodium and potassium chlorides react violently with water. Forms toxic gas when heated to decomposition.

Nickel compounds have been associated with allergic reactions, rashes and lung changes. Nickel is a respiratory irritant and may cause pneumonitis.

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

Eye Contact: Dusts or fumes containing components of dross and skimmings may cause eye irritation. Immediately flush with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact: Dust or fumes containing component elements of aluminum alloys may cause skin or mouth irritation. Copper may cause skin and hair discoloration. Magnesium particles imbedded in the skin may cause severe lesions, with slow healing. 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

When dry in solid form there is no fire or explosion hazard. When wet there is reaction with heating which is the basis for the DOT rules prohibiting shipping "Wet or Hot" drosses and skimmings

Extinguishing Media: Dross & skimmings may burn in the solid state Like other metallic and organic dust and fine powder, dross & skimmings dust and powder may burn under some conditions.

Special Fire Fighting Procedures: Confine metal powder dust fire, avoid spreading. Apply Class D (Lith X) powder in heavy quantities. **DO NOT USE WATER OR MOIST SAND.** Fire Fighters should wear self-contained breathing apparatus and protective clothing.

Unusual Fire and Explosion Hazards: Fire or explosion may occur when material is in the form of dust and exposed to heat or flames, chemical reaction or contact with powerful oxidizers.

NEVER PUT WATER ON DROSS OR SKIMMINGS – IT MAY GIVE OFF FLAMMABLE OR TOXIC GAS OR IGNITE

Section 6 Accidental Release Measures

No special precautions are necessary for spills of bulk materials. Wear gloves to prevent metal cuts. If large quantities of dust are spilled, remove by vacuuming or sweeping to prevent heavy concentrations of airborne dust. Do not use compressed air for cleaning. Place all collected materials in a labeled container. Spilled dry material may be processed and reclaimed.

Section 7 – Handling and Storage

Use good housekeeping practices to prevent accumulations of dust and keep airborne dust concentrations at a minimum. Avoid breathing dust or fumes. Store dross and

skimmings in a dry area away from incompatible materials. Keep dust away from sources of ignition. Dross and skimmings may react with water and ignite. They must be kept dry. Moisture can cause explosions if charged into a melting furnace. Dry before charging to melting furnace. Preheat, when required to evaporate moisture, prior to meeting.

Section 8 – Exposure Controls/Personal Protection

Ingredient(s)	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
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	
Lead	0.05 mg/m^3	0.15 mg/m^3	

B For dusts without an explicit OSHA PEL, a nuisance dust PEL applies (15mg/m^3 respirable dust)

Respiratory Protection: Employees may wear MSHA or NIOSH approved respirators for protection against airborne dust or fumes.

Ventilation: Local exhaust ventilation is required when dust or fumes are generated. Use general or local exhaust ventilation to keep airborne concentrations of dust and fumes below the TLV.

Protective Gloves: Advisable to avoid cuts and skin abrasions. Gloves and barrier creams may be necessary to prevent skin sensitization and dermatitis.

Eye Protection: Approved safety glasses and/or goggles should be worn when exposed to dusty or hot material. Face shields should be worn around hot metal. Safety eyewash stations should be provided near work areas.

Other Protective Clothing: Full protective clothing should be worn by workers exposed to heavy concentrations of dust or high heat and during alloying operations to prevent injury from molten metal splashing, spilling, etc.

Work/Hygienic Practices: Do not eat, drink or use tobacco products in work area. Wash thoroughly after skin contact and before eating, drinking, use of tobacco products or using restrooms. Take a shower and change clothes at the end of the shift. All protective and contaminated clothing must be left at the plant. Launder all other work clothing separately from other household laundry.

Section 9 – Physical and Chemical Properties

Boiling Point (Sodium Chloride): 2,575°F

Specific Gravity (H_2O = 1): 2.1 – 2.9

Vapor Pressure (Sodium Chloride): 1mm Hg @ 865°C

Melting Point: 1,050° - -1,480°F

Vapor Density N/A

Evaporation Rate: N/A

Solubility in Water: Black dross is water soluble, gray skimmings are minimally water soluble

Appearance and Odor: Black with silvery pellets or gray powdery silvery pellets

Section 10 – Stability and Reactivity

Stability: Stable at room temperature, **when dry**

Incompatibility: Avoid acids, bases and oxidizers.

Hazardous Decomposition or byproducts: Evolved hydrogen is confined areas may be an explosive hazard. Potentially hazardous oxides of metal may be produced when heated or in molten state.

Hazardous Polymerization: Will not occur.

Section 11 – Toxicological Information

Aluminum, aluminum alloys, sodium and potassium chlorides are not generally regarded as industrial toxins. In normal use, few health hazards occur.

No health hazard or toxicity information exists specifically for this material. Data for major components are given instead. For each in this material, the percent by weight can be used as a rough guide to the component's likely significance.

Carcinogen: Lead, Chromium & Nickel are considered a possible carcinogen by NTP and IARC.

Section 12 – Ecological Information

No special precautions are necessary for spills of bulk materials. Wear gloves to prevent metal cuts. If large quantities of dust are spilled, remove by vacuuming or sweeping to prevent heavy concentrations of airborne dust. Do not use compressed air for cleaning. Place all collected materials in a labeled container. Spilled dry material may be processed and reclaimed.

Section 13 – Disposal Considerations

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

Section 14 – Transportation Information

Copper-Tin-Lead dross and skimmings must be shipped as hazardous materials. HOT OR WET drosses and skimmings MAY NOT BE SHIPPED. The watertight truck used for transportation must be properly placarded with a white lettering on blue background placard reading "Hazardous When Wet". Plant and trucking personnel must be DOT trained in handling hazardous materials.

Section 15 – Regulatory Information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication
Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Lead (CAS 7439-92-1) 29 CFR 1910.1025
CERCLA Hazardous Substance List (40 CFR 302.4)

Copper (CAS 7440-50-8)	LISTED
Lead (CAS 7439-92-1)	LISTED
Nickel (CAS 7440-02-0)	LISTED
Zinc (CAS 7440-66-6)	LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard -	Yes
Delayed Hazard -	Yes
Fire Hazard -	No
Pressure Hazard -	No
Reactivity Hazard -	No

SARA 302 Extremely hazardous substance
No
SARA 311/312 Hazardous chemical
Yes
Other federal regulations
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Lead (CAS 7439-92-1)
Nickel (CAS 7440-02-0)
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.
Safe Drinking Water Act (SDWA)
Not regulated.
Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number
Not listed.
Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))
Not regulated.
DEA Exempt Chemical Mixtures Code Number
Not regulated.
Food and Drug Administration (FDA)
Not regulated.
US state regulations WARNING: This product contains chemicals known to the State of California to cause cancer

and birth defects or other reproductive harm.

US. Massachusetts RTK - Substance List

Copper (CAS 7440-50-8)
Lead (CAS 7439-92-1)
Nickel (CAS 7440-02-0)
Tin (CAS 7440-31-5)
Zinc (CAS 7440-66-6)

US. New Jersey Worker and Community Right-to-Know Act

Copper (CAS 7440-50-8) 500 LBS
Lead (CAS 7439-92-1) 500 LBS
Nickel (CAS 7440-02-0) 500 LBS
Zinc (CAS 7440-66-6) 500 LBS

US. Pennsylvania RTK - Hazardous Substances

Copper (CAS 7440-50-8)
Lead (CAS 7439-92-1)
Nickel (CAS 7440-02-0)
Tin (CAS 7440-31-5)
Zinc (CAS 7440-66-6)

US. Rhode Island RTK

Copper (CAS 7440-50-8)
Lead (CAS 7439-92-1)
Nickel (CAS 7440-02-0)
Tin (CAS 7440-31-5)
Zinc (CAS 7440-66-6)

US. 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

International Inventories

Country(s) or region	**Inventory name**	**On inventory (yes/no)***
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

Section 16 – Other Information

HMIS Rating:	Health 1, Flammability 1, Reactivity 2
NFPA Rating:	Health 1, Flammability 1, Reactivity 2
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

Copper-Tin-Lead Dross & Skimming's

SUPPLIER IDENTIFICATION

Company Name: Bunting Bearings LLC

HAZARD PICTOGRAMS* **SIGNAL WORD*** Danger

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

HAZARD STATEMENTS

May cause an allergic skin reaction. May cause damage to organs (Lung, central nervous system) through prolonged or repeated exposure. Suspected of causing cancer. May damage fertility or the unborn child.

PRECAUTIONARY STATEMENTS

Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Contaminated work clothing should not be allowed out of the workplace. Do not breathe dust/fume.
Response	If on skin: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. If exposed or concerned: Get medical advice/attention. Get medical advice/attention if you feel unwell.
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.

*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.