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Belmont METALS INC.

The Non Ferrous Specialists since 1896

Safety Data Sheet

V# 017723

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

1.1. Product identifier

Product Name	:	Belmont Lead Base 412 Casting Alloy (LINOTYPE)
Product Code	:	**58410**
Product List	:	LEAD, TIN, ANTIMONY ALLOY

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	:	Manufacturing of Castings, Others.

1.3. Details of the supplier of the SDS

Company identification	:	Belmont Metals Inc. 330 Belmont Avenue Brooklyn, New York 11207 USA
Phone:	:	+1.718.342.4900

Emergency Phone: (718) 342-4900 (Alloy Info)
For MEDICAL Emergency, contact a Poison Control Center or DR./ Physician.

2. HAZARDS IDENTIFICATION

NOTE: In the solid form (INGOT) in which it is provided, this material does not pose a health hazard.

We have included additional safety data since this product is handled through subsequent operations performed by the end user, such as exposure to high temperatures, melting or grinding that may produce toxic metallic or oxide dust or fume. Belmont Metals Inc. does not warranty this material for any specific application and all precautions must be taken by the end user to prevent and protect against exposure to inhalable particulate.

See section 8 for information on exposure controls and personal protection.

WHMIS (Canada) : CLASS D-2A : Very toxic material (Lead) causing other toxic effects.

2.1. Hazard Classes (categories) Hazard statements

- Lead / Antimony HMIS Rating :

HEALTH	2
FIRE	0
REACTIVITY	0

Mutagen (2) : H341- Suspected of causing genetic defects.
Reprotoxic (2) : H361 - Suspected of damaging fertility or the unborn child.
. STOT RE (1) : H372-Causes damage to organs through prolonged or repeated exposure.
Aquatic acute (1) : H400- Very toxic to aquatic life.
H410- Very toxic to aquatic life with long lasting effects.

Hazard words : Warning

Mutagen
reproduction toxic

Hazardous to the aquatic environment

Precautionary Statements

- P260 : Do not breathe dust/fume/gas/mist/vapors/spray.
- P264 : Wash (hands, face, and contaminated skin by the product) thoroughly after handling.
- P270 : Do not eat, drink or smoke when using this product.
- P273 : Avoid release to the environment.
- P281 : Use personal protective equipment as required.

2.2. Other hazards

- Reactive with : Acids, oxidants. Release of hydrides, hydrogen.
  Possibility of eye and skin irritation (Particles).
  Ingestion will nearly always cause acute gastro-intestinal irritation.
- Acute exposure : Possibility of other organs and body systems damages.

3. COMPOSITION / INFORMATION OF INGREDIENTS

Name	CAS-No.	Percentage (%)	EC-No.	Hazard Statements
Tin	7440-31-5	< 5	231-141-8	None
Antimony	7440-36-0	< 12	231-146-5	H410
Lead	7439-92-1	> 85	231-100-4	H341 – H361 – H372 – H400-H410

4. FIRST AID MEASURES

4.1. Description of first aid measures

- Eye contact : P305+P351+P338-If IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Skin contact : P302+P352-IF ON SKIN: Wash with plenty of soap and water. P333+P313-IF skin irritation or rash occurs: Get medical advice/attention.
- Inhalation : P308+P313-IF exposed or concerned: Get medical advice/attention. If breathing is difficult, give oxygen.
- Ingestion : P301+P310-IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician.
- P330-Rinse mouth. Induce vomiting.
UNCONSCIOUS persons: DO NOT induce vomiting or give any liquids.

5. FIRE-FIGHTING MEASURES

5.1. Fire-fighting measures

NFPA Rating

- Flash point : Not available.
- Flammable limits : Not available.
- Auto-ignition temperature : Not available.
- Products of combustion : Metal oxides
- Fire hazard : Solid form: No fire hazard. Avoid melting moist metal. Dust: Flammable when exposed to heat or flames. Heated and on contact with acids or acid fumes, metals can release hydrogen and form Stibine, (Extremely toxic gas).
Tin: Fine dust combustible when exposed to heat.
Antimony: Spontaneously flammable in fluorine, chlorine or bromine. With iodine: Reaction produces heat, which may cause flames or explosion if quantities are great enough. Dust or vapors exposed to heat or flame: Moderate fire or explosion hazard.
Lead: In contact with fire or heat source, it may melt and then if in contact with water, will cause a violent reaction. Possibility of toxic Lead vapors formation.
- Explosion hazard : Not explosive (Mechanical impact; Static discharge). NEVER spray water on burning metal because of the risk of explosion which would splatter flaming particles of metal to great distances.
Dust: Slightly explosive to explosive in presence of open flames and sparks.
- Extinguishing media : NON-FLAMMABLE. Use firefighting materials and procedures adapted to the immediate environment.
- Protective equipment : Fire-fighters must wear full protective clothing and self-contained breathing apparatus (SCBA).

6. ACCIDENTAL RELEASE MEASURES

- Measures : P391-Collect spillage.
- Methods : Use appropriate tools to place spilled materials in suitable containers for reclamation or disposal.
- Protective equipment : High concentration of fumes or dust or risk of emission of toxic material (Stibine): Use a positive-pressure, self-contained breathing apparatus (SCBA) to avoid inhalation of material. Low concentrations : Use a NIOSH/OSHA approved full face cartridge respirator or the equivalent. Full protective clothing. Work gloves and boots.

7. HANDLING AND STORAGE

- Handling : DO NOT ingest or inhale dust. Wear adequate protective clothing. Wear approved respirators if adequate ventilation cannot be provided. Ingestion or inhalation: Seek medical advice immediately and provide medical personnel with a copy of this SDS.
: Heated and on contact with acids or acid fumes, metals (Aluminum, zinc, iron, etc.) can release hydrogen: Nascent hydrogen may form: Antimony hydride (Stibine) (Extremely toxic gas). If hydrides suspected in the area, the workplace must be immediately evacuated. Personnel entering this area MUST wear positive-pressure, self-contained breathing apparatus (SCBA).
- Conditions for storage : P405-Store locked up. Container tightly closed. Well ventilated area. Away from: Moisture, incompatible substances (Acids).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Name	CAS-No.	Percentage (%)	TVL-TWA (mg/m3)	PEL-TWA (mg/m3)	TWAEV (mg/m3)
Tin	7440-31-5	70 – 100	2 (Sn)	2 (metal, compounds)	2 (metal)
Antimony	7440-36-0	1 – 10	0.5 (Sb, compounds Sb)	0.5 (Sb, compounds	0.5 (Sb, compounds
Lead	7439-92-1	0 – 1	0.05 (Pb, inorganic compounds Pb)	0.05 (Pb, Pb	0.05 (Pb, inorganic compounds Pb)

NOTE: Tin: ACGIH TLV TWA: Metal, oxide, inorganic compounds (Sn) except SnH. OSHA PEL-TWA: Metal, inorganic compounds (Sn) except oxides, NIOSH REL-TWA (≤10 hours): 2 mg/m3 (except oxides); IDLH: 100 mg/m3.

Antimony: ACGIH TLV-TWA: Elemental and compounds. NIOSH REL-TWA (≤10 hours): 0.5 mg/m3; IDLH: 50 mg/m3.

Lead: ACGIH TLV TWA: 0.05 mg/m3 (Lead and inorganic compounds). NIOSH REL-TWA ((≤10 hours): 0.05 mg/m3 ; REL also applies to other lead compounds (as Pb) ; ; IDLH : 100 mg/m3 (metal ; compounds). OSHA PEL-TWA: PEL also applies to other lead compounds (as Pb).

Consult local authorities for acceptable exposure limits

- Engineering Controls : Use process enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below recommended exposure limits.
- Individual protection : Safety goggles. Coverall. Work gloves and boots. Dust respirator. Be sure to use a NIOSH approved respirator or equivalent when concentrations exceed occupational exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Solid (Pig Ingot, Bar, Granular, Shot).
Color	:	Grey to Silver.
Odor	:	Odorless or Metallic Odor.
Taste	:	Not applicable.
Molecular weight	:	Not applicable.
pH (1% soln/water)	:	Not applicable.
Boiling point [°C]	:	Not available.
Melting Point [°C]	:	Weighted average: 462 - 477 °F
Critical temperature	:	Not available.
Specific gravity	:	Weighted average: > .33 lb. / Cu Ft
Vapor pressure	:	Not available.
Vapor density	:	Not available.
Solubility (Water)	:	No.
Volatility	:	Not available.

% moisture	:	Not available.
Odor threshold	:	Not available.
Water/oil dist. Coeff.	:	Not available.
Ionicity (in water)	:	Not available.
Dispersion (Water)	:	No.

10. STABILITY AND REACTIVITY

10.1. Stability	:	Yes (under normal temperature conditions of ambient temperature).
10.2. Reactivity	:	Reactive or incompatible with: Acids.
10.3. Hazardous decomposition products	:	Metal oxides. Heated and on contact with acids or acid fumes, metals (Soft or galvanized metal, aluminum) can release hydrogen and form antimony hydride (Stibine) (Extremely toxic gas).
10.4. Conditions to avoid	:	Acids.
10.5. Dangerous polymerization	:	No.
10.6. Materials to avoid	:	Tin: Reacts violently under certain conditions with: Chlorine, bromine, trifluoride (Chlorine, bromine), acids and oxidants. Can react with some extinguishing agents (Bicarbonate powder, carbon dioxide). Antimony : Possibility of violent reaction with : Ammonium nitrate, bromate trifluoride, halogens, chloric acid, chlorine trifluoride, nitric acid, potassium nitrate, potassium permanganate, dipotassium peroxide, sodium nitrate and oxidants. Lead: Violent reaction on ignition with: Chlorine trifluroide, concentrated hydrogen peroxide, ammonium nitrate, sodium acetylide. Other incompatibilities: Sodium nitrate, zirconium, disodium acetylide, oxidants. *NOTE: This list of products is not exhaustive. Verify technical documents to determine any incompatibilities with your process.*
10.7. Corrosivity	:	No.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

- Route of entry	:	Ingestion. Inhalation. Eyes and skin contact.
- Carcinogenicity	:	Lead: POSSIBLE (Group 2B, IARC) (EPA) ; CARCINOGEN (Animal, A3 ACGIH). Tin : NOT A CARCINOGEN (IARC, OSHA, NTP) ; NOT LISTED(ACGIH). Antimony: NOT LISTED (IARC, ACGIH).
- Mutagenicity	:	Lead: Cytogenetic analysis ; DNA. (RTECS).
- Teratogenicity	:	Lead: SUSPECTED (OSHA). Effects on embryo or foetus, fertility (RTECS).
- Acute toxicity	:	Tin: UNREPORTED ROUTE acute (LoTD) : 250 mg/kg (Human). (RTECS). Antimony: ORAL acute (LD50) : 7 000 mg/kg (Rat). INTRAPERITONEAL acute (LD50) : 100 mg/kg (Rat) ; 80 mg/kg (Mouse). (RTECS).
- Acute effects	:	Solid form: No health hazards. Conditions and work practices which generate dust or fumes should be avoided or controlled. Other forms: Dangerous (ingestion, inhalation). Lead: Absorption is easier by inhalation and symptoms develop more quickly than by ingestion. Symptoms: Loss of appetite, anemia, insomnia, headache, muscle and joint pain. Toxicity by ingestion compared to those by inhalation, requires greater concentrations before symptom onset.
- Chronic effects	:	Non-controlled repeated or prolonged exposure: Possibility of target organ damages (Blood, kidneys, liver, lungs; nervous and reproductive systems). Repeated exposure: Possibility of a general health deterioration by an accumulation in one or many organs.

Tin: Low toxicity for humans. Chronic inhalation of oxide (Dust, fume) may cause stannosis (Benign pneumoconiosis) without any pulmonary functional impairment. Other sensitive organs: Kidneys, central nervous system.
Antimony: The principal toxicological properties mimic those of arsenic such as: abdominal cramps, nausea, vomiting, watery diarrhea which may be bloody. Possibility of dermatitis called antimony spots: Papules and pustules around sweat and sebaceous glands (Generally on the forearms) which resemble chicken pox and are transient in nature. Some people may develop an allergy to antimony metal. Inhalation (Antimony and compounds): Possibility of pneumoconiosis which can lead to some obstructive lung disease.
There is some evidence that antimony may have some effect on the heart.

- Toxicity : Persons with the following pre-existing conditions warrant particular attention:-

Tin: Respiratory system (Inorganic compounds).
Antimony: Pulmonary and cardiac conditions.
Lead: Anemia, pregnant or breast feeding women and women of child bearing age. Preferred method for biological monitoring: Blood lead levels (Pb blood) measurement (BEI 30 µg/100 ml) ; Sampling time : Not critical.

Eating, drinking and smoking must be prohibited in areas where this material is handled and processed. Wash hands and face before eating, drinking and smoking.

12. ECOLOGICAL INFORMATION

12.1. Toxicity
- Ecotoxicity : Heavy metals: Harmful to aquatic life.
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- Toxicity to animals : Tin: UNREPORTED ROUTE acute (LoTDl) : 250 mg/kg (Human). (RTECS).
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Lead: ORAL acute (LoLD) : 155 mg/kg (Human) ; 0.2 mg/kg (Rat). INHALATION acute (LoTC) : 10 µg/m3 (Human). INTRAPERITONEAL acute (LoLD) : 1 g/kg (Rat. (RTECS).

12.2. Mobility in soil : Not applicable
12.3. Persistence and degradability : Not applicable.
12.4. Bioaccumulation : Not applicable.
12.5. Biodegradation products : Not biodegradable.
- Biodegradation products (Toxicity) Not applicable.

12.6. Other adverse effects
- Remarks on environment : Due to the product's composition, particular attention must be taken : Substances potentially toxic to aquatic life include Lead. Run-off water may become acidic and may be harmful to flora and fauna.
- BOD5 and COD : Not available.

13. DISPOSAL CONSIDERATIONS

13.1. Disposal methods : Scrap metal alloy usually has value. Contact a commercial recycler for recycling. Otherwise, dispose of in accordance with all Federal, State and Local environmental regulations.

P501-Dispose of contents/container in full compliance with Federal, Provincial and local regulations.

14. TRANSPORT INFORMATION

Transport in accordance with applicable regulations and requirements.
Solid metal mixtures are not hazardous under shipping regulations (ground/air/sea).
UN – none
US DOT (United States Department of Transportation: Not regulated

TDG (Pictograms)	:	Not regulated (Canada).
IATA	:	Not applicable.
PIN	:	Not applicable.
Special provisions (Transport)	:	Not applicable.

Marine Pollutant: No

15. REGULATORY INFORMATION

- Labelling (GHS)	:	
- Labelling (DSD)	:	EU: Consolidated Inventories: Listed Tin : EU Consolidated Inventories : EC Number 231-141-8. Antimony: EU Consolidated Inventories: EC Number 231-146-5. Lead: EU Consolidated Inventories: EC Number 231-100-4. Not classified in the Annex I of Directive 67/548/EEC. Not listed in the Annex I of Council Regulation No (EC) 304/2003. Not listed in a priority list (as foreseen under Council Regulation (EEC) No 793/93.
Risk phrases (DSD)		R48/23/25-Toxic: danger of serious damage to health by prolonged exposure through inhalation and if swallowed. R50/53-Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R62-Possible risk of impaired fertility. R63-Possible risk of harm to the unborn child. R68-Possible risk of irreversible effects.
Safety phrases (DSD)		S22-Do not breathe dusts. S36-Wear suitable protective clothing. S45-In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S53-Avoid exposure – obtain special instructions before use. S60-This material and/or its container must be disposed of as hazardous waste. S61-Avoid release to the environment. Refer to special instructions/Safety data sheets.
CEPA DSL (CANADA)		CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) : on the Domestic Substances List (DSL) ; acceptable for use under the provisions of CEPA.
Regulation (U.S.A.)		CERCLA Section 103 Hazardous substances (40 CFR 302.4) ; SARA 110 ATSDR CERCLA Priority List : Listed ; SARA Section 313, Toxic Chemicals (40 CFR 372.65) : Listed. Antimony (RQ) : *5 000 pounds (2 270 kg). Lead (RQ) : *10 pounds (4.54 kg). TSCA (EPA, Toxic Substance Control Act) Chemical Inventory (40 CFR710) : Listed. Tin ; Antimony ; Lead ; * No declaration required if the diameter piece of solid metal released is equal to or exceeds 100 micrometers (0.004 inches).
Classifications HCS (U.S.A.)		Toxic.
NFPA (National Fire Protection Association) (U.S.A.)		Fire Hazard 0 Reactivity 0 Health 2 Special Hazard

SARA 313 Listing – 40 CFR 372.65: Lead CAS# 7439-92-1, Copper CAS# 7440-50-8, Antimony CAS# 7440-36-0, All ingredients are listed on the US EPA TSCA Inventory.

All ingredients are listed on the Canadian Domestic Substance List, the Chinese Chemical Inventory, the Philippines Inventory of Chemicals, the Korea Inventory of Existing Chemicals, the European Inventory of Existing Commercial Chemical Substances, the New Zealand Inventory of Chemicals and the Australian Inventory of Chemicals. EPA Genetic Toxicology Program – Lead CAS# 7439-92-1,

EC Classification, Packaging and Labeling Requirements: None
Hazard Classification of Product: None

CALIFORNIA (PROPOSITION 65):
The components of this material are known in the State of California to cause cancer, and/or birth defects (or other reproductive harm).

16. OTHER INFORMATION

MANUFACTURER DISCLAIMER:

Belmont Metals Inc. believes that the information contained in this Safety Data Sheet (SDS) is accurate as of the "Date of Last Revision" specified on this SDS. As the condition or methods of use are beyond Our control, we do not assume any responsibility and expressly disclaims any liability for any use of this material. The information relates only to typical properties of the product. Do not use the information for product performance or specification purposes. The information is for use by technically skilled persons at their own risk whom must determine the conditions of safe use of the products.

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