

UNITED BRONZE OF PITTSBURGH INC. SAFETY DATA SHEET

 FAMILY OWNED SINCE 1918

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1. Identification

Product identifier	Phos Copper Tin Alloys
Other means of identification	
SDS number	110
Product code	C51000
Recommended use	Manufacturing
Recommended restrictions	Use in accordance with supplier's recommendations
Manufacturer / Importer / Supplie	er / Distributor information
Company name	United Bronze of Pittsburgh Inc.
Address	P. O. Box 317, Creighton, PA 15030
Telephone	724-226-8500
Contact person	Bob Orringer
E-mail	bronze713@aol.com
Emergency phone number	724-226-8500

2. Hazard(s) identification

Physical hazards Health hazards OSHA hazard(s)	Not classified. Reproductive toxicity Not classified.	Category 1A
Label elements		
Hazard symbol		
Signal word	Danger	
Hazard statement	May damage fertility or the unbor	n child.
Precautionary statement		
Prevention	Obtain special instructions before	use. Do not handle until all safety precautions have been read

	and understood. Use personal protective ed	quipment as required.
Response	If exposed or concerned: Get medical advice/attention.	
Storage	Store locked up.	
Disposal	Dispose of contents/container in accordanc	e 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 2

3. Composition/information on ingredients

Mixture

Hazardous components

Chemical name	Common name and synonyms	CAS number	%
Copper		7440-50-8	87-95
Tin		7440-31-5	1.5-11
Zinc		7440-66-6	0-4.5
Lead		7439-92-1	0-4
Nickel		7440-02-0	0-0.2

Composition comments	All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. The alloy contains additional alloying elements at concentrations below disclosure requirements. At temperatures above the melting point the alloys may liberate fumes containing oxides of alloying elements.
4. First-aid measures	
Inhalation	In case of exposure to fumes or particulates: Move to fresh air. Get medical attention if discomfort persists.
Skin contact	Contact with dust: Wash skin with soap and water. In case of contact with hot or molten product, cool rapidly with water and seek immediate medical attention. Do not attempt to remove molten product from skin because skin will tear easily. Cuts or abrasions should be treated promptly with thorough cleansing of the affected area.
Eye contact	Do not rub eyes. Remove any contact lenses. Flush eyes thoroughly with water, taking care to rinse under eyelids. If irritation persists, continue flushing for 15 minutes, rinsing from time to time under eyelids. If discomfort continues, consult a physician.
Ingestion	Rinse mouth thoroughly if dust is ingested. Only induce vomiting at the instruction of medical personnel. Get medical attention if any discomfort continues.
Most important symptoms/effects, acute and delayed	May cause irritation to mucous membranes. May cause skin and eye irritation. Cough. Shortness of breath. Wheezing. The principal symptoms of lead poisoning are gastro-intestinal or central nervous system disturbances and anemia.
Indication of immediate medical attention and special treatment needed	Treat symptomatically. Symptoms may be delayed.
General information	Get medical attention if any discomfort develops. Seek medical attention for all burns, regardless how minor they may seem. Show this safety data sheet to the doctor in attendance.
5. Fire-fighting measures	
Suitable extinguishing media	Special powder against metal fires. Dry sand.
Unsuitable extinguishing media	Do not use water or halogenated extinguishing media. Do not use water on molten metal: Explosion hazard could result.
Specific hazards arising from the chemical	Solid metal is not flammable; however, finely divided metallic dust or powder may form an explosive mixture with air. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.
Fire-fighting equipment/instructions	Move containers from fire area if you can do it without risk.
Specific methods	Move containers from fire area if you can do so without risk.
6. Accidental release meas	ures
Personal precautions, protective equipment and emergency procedures	Ensure adequate ventilation. Avoid inhalation of dust and contact with skin and eyes. Wear protective clothing as described in Section 8 of this safety data sheet.
Methods and materials for containment and cleaning up	Allow spilled material to solidify and scrape up with shovels into a suitable container for recycle or disposal. If not possible, gently moisten dust before it is collected with shovel, broom or the like. Collect dust using a vacuum cleaner equipped with HEPA filter. The vacuum cleaner should be explosion-proofed. Avoid dust formation. This material and its container must be disposed of as hazardous waste.
Environmental precautions	Avoid release to the environment. Do not contaminate water.
7. Handling and storage	
Precautions for safe handling	Follow special national provisions related to work with lead and its compounds. Pregnant women should not work with the product, if there is the least risk of lead exposure. Welding, burning, sawing, brazing, grinding or machining operations may generate fumes and dusts of metal oxides. Provide adequate ventilation. Avoid contact with sharp edges and hot surfaces. Avoid inhalation of dust and contact with skin and eyes. Avoid generation and spreading of dust and fumes. Avoid contact with hot or molten material. Dust clouds may be explosive under certain conditions. Take precautionary measures against static discharges when there is a risk of dust explosion. Use explosion-proof electrical equipment if airborne dust levels are high. To prevent and minimize fire or explosion risk from static accumulation and discharge, effectively bond and/or ground product transfer system. Wear appropriate personal protective equipment. Do not use water on molten metal. Do not eat, drink or smoke when using the product. Keep the workplace clean. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Keep dry. Store away from incompatible materials.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Lead (CAS 7439:92-1) TVA 0.05 mg/m3 US. OSHA Table Z-1 Limits for Air Contaminants (28 CFR 1910.1000) Form Components Type Value Form Copper (CAS 7440-02-0) PEL 1 mg/m3 Dust and mist. Nickel (CAS 7440-31-5) PEL 2 mg/m3 Eume. US. ACGIH Throshold Limit Values Components Type Value Form Copper (CAS 7440-31-5) PEL 2 mg/m3 Fume. Lead (CAS 7440-02-0) TWA 1 mg/m3 Dust and mist. Copper (CAS 7440-02-0) TWA 0.05 mg/m3 Innae. Nickel (CAS 7440-02-0) TWA 0.05 mg/m3 Innae. Nickel (CAS 7440-02-0) TWA 1.5 mg/m3 Inhalable fractio Tin (CAS 7440-02-0) TWA 2 mg/m3 Dust and mist. US. NOSH: Pocket Guide to Chemical Hazards 0.06 mg/m3 Dust and mist. Comporents Type Value Form Copper (CAS 7440-02-0) REL 0.06 mg/m3 Dust and mist. Lead (CAS 7440-02-0) REL 0.06 mg/m3 Dust and mist. Lead (CAS 7440-02-0) REL 0.05 mg/m3 Dust and mist. Lead (CAS 7440-02-0) REL 0.05 mg/m3 Dust and mist.	Components	Туре			Value	
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should be used to eliminate the possibility of contaminating the home environment. Hand accordance with good industrial hygiene and safety practices. Observe any medical surv requirements.	General hygiene considerations	Always observe good and before eating, du equipment to remove other clothing to prevision should be used to eli accordance with good requirements.	d personal hygie rinking, and/or s e contaminants. vent potential cro iminate the poss od industrial hygi	me measures, moking. Routin Contaminated oss-contaminat ibility of contar ene and safety	such as washing ely wash work clo uniforms should l ion. If possible, a ninating the home practices. Obser	after handling the material othing and protective be laundered separately from n industrial laundry service e environment. Handle in we any medical surveillance

9. Physical and chemical properties

Appearance	Solids, Shapes, Tubes, Turnings & Bushings.
Physical state	Solid.
Form	Solids, Shapes, Tubes, Turnings & Bushings.
Color	Yellow to red.
Odor	None.
Odor threshold	Not available.
рН	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or exp	losive limits
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	Insoluble in water.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
10. Stability and reactivity	
Reactivity	Stable at normal conditions.
Chemical stability	Massive metal is stable and non reactive under normal conditions of use, storage and transport
Possibility of hazardous reactions	Hazardous polymerization does not occur. Contact with acids will release flammable hydrogen gas. Hot molten material will react violently with water resulting in spattering and fuming.
Conditions to avoid	Contact with incompatible materials. Contact with acids will release flammable hydrogen gas. Avoid dust formation. Dust clouds may be explosive under certain conditions.
Incompatible materials	Acids. Ammonium nitrate. Fluoride. Halogens. Nitrates. Phosphorus. Strong oxidizing agents. Sulfur.

Hazardous decomposition
productsWelding, burning, sawing, brazing, grinding or machining operations may generate dusts and
fumes of metal oxides. Lead oxide fumes may be formed at elevated temperatures.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Not relevant, due to the form of the product. However, ingestion of dusts generated during working operations may cause nausea and vomiting.
Inhalation	May cause respiratory tract irritation. Elevated temperatures or mechanical action may form dust and fumes which may be irritating to the mucous membranes and respiratory tract.
Skin contact	May cause skin irritation. Hot or molten material may produce thermal burns.
Eye contact	May cause eye irritation. Molten material will produce thermal burns.
Symptoms related to the physical, chemical and toxicological characteristics	May cause irritation to mucous membranes. May cause skin and eye irritation. Coughing. Shortness of breath. Wheezing. The principal symptoms of lead poisoning are gastro-intestinal or central nervous system disturbances and anemia.

Information on toxicological effects

Acute toxicity	May cause eye, skin and respiratory tract irritation. Dusts may irritate the respiratory tract, skin and eyes. High concentrations of freshly formed fumes/dusts of metal oxides can produce symptoms of metal fume fever.	
Skin corrosion/irritation	Elevated temperatures or mechanical action may form dust and fumes which may be irritating to the eye, mucous membranes and respiratory tract. Hot or molten material may produce thermal burns.	
Serious eye damage/eye irritation	Dust from machining operation	in the eyes may cause irritation.
Respiratory sensitization	No data available.	
Skin sensitization	The product contains a small ar reaction among sensitive individ	nount of sensitizing substance which may provoke an allergic duals in contact with skin.
Germ cell mutagenicity	No data available.	
Carcinogenicity		
IARC Monographs. Overall E	valuation of Carcinogenicity	
Lead (CAS 7439-92-1) Nickel (CAS 7440-02-0) NTP Report on Carcinogens		2B Possibly carcinogenic to humans. 1 Carcinogenic to humans.
Nickel (CAS 7440-02-0)		Known To Be Human Carcinogen. Reasonably Anticipated to be a Human Carcinogen.
Reproductive toxicity	May damage fertility or the unbocause harm to the unborn child	orn child. Contains a substance/a group of substances which may .
Specific target organ toxicity - single exposure	No data available.	
Specific target organ toxicity - repeated exposure	Not available.	
Aspiration hazard	Not applicable.	
Chronic effects	Danger of cumulative effects. Prolonged and repeated overexposure to dust and fumes can lead to benign pneumoconiosis (stannosis). Chronic inhalation of metallic oxide dust/fume may cause metal fume fever. Lead may produce maternal toxicity, toxicity to the fetus, and adverse effects to blood, bone marrow, central/peripheral nervous systems, kidney, liver, and reproductive system.	
Further information	Lead is accumulated in the bod prolonged exposure. Welding o oxides and ultraviolet radiation. pulmonary discomfort. UV radia	y and may cause damage to the brain and nervous system after r plasma arc cutting of metal and alloys can generate ozone, nitric Ozone overexposure may result in mucous membrane irritation or ation can cause skin erythema and welders flash.
12. Ecological information		

Ecotoxicity	Toxic to aquatic life with long lasting effects.		
Components		Species	Test Results
Lead (CAS 7439-92-1)			
	LC50	Rainbow trout, donaldson trout (Oncorhynhus mykiss)	1.17 mg/l, 96 Hours
Persistence and degradability	The product is	not biodegradable.	
Bioaccumulative potential	The product contains potentially bioaccumulating substances.		
Mobility in soil	Alloys in massive forms are not mobile in the environment.		
Mobility in general	Alloys in massive forms are not mobile in the environment.		
Other adverse effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.		
13. Disposal consideration	ons		
Disposal instructions	This material a with all applica	and its container must be disposed of as ha	azardous waste. Dispose in accordance

Contaminated packaging	Not applicable.
Waste from residues / unused products	Recover and recycle, if practical. Solid metal and alloys in the form of particles may be reactive. Its hazardous characteristics, including fire and explosion, should be determined prior to disposal.
Hazardous waste code	Z110: Inorganic compounds n.o.s.
Local disposal regulations	Dispose in accordance with all applicable regulations.
	with an applicable regulations.

14. Transport information

DOT

UN number	UN3077
UN proper shipping name	Environmentally hazardous substances, solid, n.o.s. (Lead RQ = 393 LBS)
Transport hazard class(es)	9

Subsidiary class(es)	-	
Packing group	III	
Special precautions for user	Not available.	
Labels required	9	
Special provisions	8, 146, 335, A112, B54, IB8, IF	'3, N20, T1, TP33
Packaging exceptions	155	
Packaging non bulk	213	
Packaging bulk	240	
ΙΑΤΑ		
UN number	UN3077	
UN proper shipping name	Environmentally hazardous sul	ostance, solid, n.o.s. (Lead)
Transport hazard class(es)	9	
Subsidiary class(es)	-	
Packaging group	111	
Labels required	9	
ERG Code	9L	
Special precautions for user	Not available	
IMDG		
UN proper shipping name	ENVIRONMENTALLY HAZARI	DOUS SUBSTANCE, SOLID, N.O.S. (Lead), MARINE
	POLLUTANI	
Transport hazard class(es)	9	
Subsidiary class(es)	-	
Packaging group		
Labels required	9	
EmS	F-A, S-F	
Special precautions for user	Not available.	
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.	
15. Regulatory information		
US federal regulations	This product is a "Hazardous C Standard, 29 CFR 1910.1200.	hemical" as defined by the OSHA Hazard Communication
TSCA Section 12(b) Export N	otification (40 CFR 707, Subp	t. D)
Not regulated		
US OSHA Specifically Regul	ated Substances (29 CER 191	0 1001-1050)
		20 CED 4040 4025
CERCLA Hererdeue Substan	an Lint (40 CER 202 4)	29 CFR 1910.1025
CERCLA Hazardous Substan	Ce List (40 CFR 302.4)	
Copper (CAS 7440-50-8)		LISTED
Lead (CAS 7439-92-1)		LISTED
NICKEI (CAS 7440-02-0)		
ZINC (CAS 7440-00-0)		LISTED
Superfund Amendments and Rea	uthorization Act of 1986 (SAR	A)
Hazard categories	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - No Pressure 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		
Not regulated.	112(r) Accidental Release Pre	vention (40 CFR 68.130)

Drug Enforcement Administr Code Number	ation (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 13 ⁴	10.04(f)(2) and Chemical
Not listed. Drug Enforcement Administr	ation (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))
Not regulated.		
DEA Exempt Chemical Mixtu	res Code Number	
Not regulated.		
Food and Drug Administration (FDA)	Not regulated.	
US state regulations	WARNING: This product contains chemicals known to the State of Cal and birth defects or other reproductive harm.	ifornia to cause cancer
US. Massachusetts RTK - Sul	bstance 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 G	Community Right-to-Know Act	
Copper (CAS 7440-50-8) Lead (CAS 7439-92-1) Nickel (CAS 7440-02-0) Zinc (CAS 7440-66-6)	500 LBS 500 LBS 500 LBS 500 LBS	
US. Pennsylvania RTK - Haza	rdous 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		
US - California Proposition 68 Lead (CAS 7439-92-1) Nickel (CAS 7440-02-0)	5 - Carcinogens & Reproductive Toxicity (CRT): Listed substance	
International Inventories		
Country(s) or region Australia	Inventory name Australian Inventory of Chemical Substances (AICS)	On inventory (yes/no) * 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
United States & Puerto Rico *A "Yes" indicates this product com	Toxic Substances Control Act (TSCA) Inventory aplies with the inventory requirements administered by the governing country(s)	Yes

16. Other information, including date of preparation or last version

Issue date	June 01, 2015
Version #	1.0
Further information	Not available.

References	HSDB® - Hazardous Substances Data Bank IARC Monographs. Overall Evaluation of Carcinogenicity National Toxicology Program (NTP) Report on Carcinogens ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices
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