

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: PHOSPHOR BRONZE ALLOYS
Chemical Name: Metal Alloy
Synonyms: Copper Tin Phosphorus Alloys; UNS/CDA Alloy Nos. c50000 – c52999
Chemical Family: Copper
Formula: Not applicable - mixture
Product Use: Metallurgical Products
Manufacturer:

SDS Control Group

Olin Brass

305 Lewis and Clark Blvd

East Alton, IL 62024-1197

www.olinbrass.com

Technical Information:

(618)258-5654

Emergency Information:

(618)258-5167

2. HAZARD IDENTIFICATION

United States (US)

According to the OSHA 29 CFR 1910.1200 HCS

Health hazards associated with this product only apply in a fume or dust form.

Classification of the substance or mixture (Fume or Dust)

OSHA HCS 2012 Flammability – 0 Health – 1 Physical – 0

Label Elements OSHA HSC 2012



Hazard Statements Causes skin irritation – H315

May cause respiratory irritation – H335

Precautionary statements Avoid breathing dust or fumes – P261

Prevention Avoid breathing dust or fumes – P261

Do not get in eyes, on skin, or on clothing – P262

In case of inadequate ventilation wear respiratory protection – P285

Response

<u>EYE CONTACT:</u>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. – P305 + P351 + P338. If eye irritation develops, Get medical advice/attention – P313
<u>SKIN CONTACT:</u>	Rinse skin with water/shower – P353 Take off contaminated clothing and wash before reuse – P362 If skin irritation or rash develops, get medical advice/attention – P363
<u>INHALATION:</u>	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing – P340 Get medical advice/attention – P313
<u>INGESTION:</u>	Not a likely route of exposure for finished metal alloy. If dust is ingested, immediately drink water to dilute. Get medical advice/attention – P363
<u>NOTE TO PHYSICIANS:</u>	There is no specific antidote to the active ingredients in this product; use symptomatic treatment.

Other Hazards

OSHA HSC 2012 Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Exposure to dust or fume may aggravate an existing dermatitis, asthma, emphysema, or other respiratory disease.

Canada According to WHMIS

Classification of the substance or mixture

WHMIS This product is considered to be a manufactured article and therefore not subject to WHMIS requirements.

Other Information

NFPA Not rated

3. COMPOSITION/INFORMATION ON INGREDIENTS

OSHA REGULATORY STATUS: In solid form, not hazardous. Dust or fume: carcinogen, irritant, lung, blood, kidney, reproductive and developmental toxin, neurotoxin, sensitizer

In solid form, this material is not hazardous. Dust and fumes are hazardous materials.

4. FIRST AID MEASURES

- EYE CONTACT:** Immediately flush out fume and dust particles with large amounts of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If eye irritation develops, call a physician at once.
- SKIN CONTACT:** If exposed to dust or fumes, wash skin with plenty of water. Remove contaminated clothing and shoes and launder before reuse. If skin irritation or rash develops and persists or recurs, get medical attention.
- INHALATION:** If symptoms of lung irritation occur (coughing, wheezing or breathing difficulty), remove from exposure area to fresh air immediately. If breathing has stopped, perform artificial respiration. Keep affected person warm and at rest. Get medical attention.
- INGESTION:** Not a likely route of exposure for finished metal alloy. If dust is ingested, immediately drink water to dilute. Consult a physician if symptoms develop.
- NOTE TO PHYSICIANS:** There is no specific antidote to the active ingredients in this product; use symptomatic treatment.

5. FIRE FIGHTING MEASURES

PROPERTY	VALUE	PROPERTY	VALUE
Explosive	No	Flammable	No
Combustible	No	Pyrophoric	No
Flash Point (°C):	Not Applicable	Burning Rate of Material	Not Applicable
Lower Explosive Limit:	Not Applicable	Auto Ignition Temp:	Not Applicable
Upper Explosive Limit:	Not Applicable	Flammability Classification: (Defined by 29 CFR 1910.1200)	Not Applicable

- UNUSUAL FIRE AND EXPLOSION HAZARDS:** Dust may cause an ignitable and/or an explosive atmosphere.
- EXTINGUISHING MEDIA:** For localized powder fires, smother with dry sand, dry dolomite, sodium chloride or soda ash. Use fire-extinguishing media appropriate to fight surrounding fire.
- SPECIAL FIREFIGHTING PROCEDURES:** None required.

6. ACCIDENTAL RELEASE MEASURES

FOR ALL TRANSPORTATION ACCIDENTS, CALL (618) 258-5167.

Not applicable to steel in solid state. For spills involving finely divided particles, clean-up personnel should be protected against contact with eyes and skin. Fine, dry material should be removed by vacuuming or wet sweeping methods to prevent spreading of dust. Avoid using compressed air. Do not release into sewers or waterways. Collect material in appropriate, labeled containers for recovery or disposal in accordance with federal, state, and local regulations.

7. HANDLING AND STORAGE

HANDLING:	
STORAGE:	

<i>Shelf Life Limitations:</i>	
<i>Incompatible Materials for Packaging:</i>	
<i>Incompatible Materials for Storage or Transport:</i>	Store away from acids and incompatible materials.
OTHER PRECAUTIONS:	Do not shake clothing, rags or other items to remove dust. Dust should be removed by washing or HEPA vacuuming.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

*This substance is regulated by OSHA as a Particulate Not Otherwise Regulated (PNOR). The exposure limits listed for both OSHA and ACGIH refer to total dust; the OSHA PEL for the respirable fraction is 5 mg/m³.

ENGINEERING CONTROLS: Local exhaust ventilation is recommended if significant dusting occurs or fumes are generated. Otherwise, use general exhaust ventilation.

EYE / FACE PROTECTION: Use safety glasses.

SKIN PROTECTION: Wear impervious (cut-resistant), gloves and other protective clothing (aprons, coveralls) as appropriate. If handling heated materials, use heat resistant gloves and clothing. Wash hands after handling.

RESPIRATORY PROTECTION: Respiratory protection not normally needed. If dusting occurs or fumes are generated above the PEL/TLV, use a NIOSH-approved half-face or full-face respirator equipped with High Efficiency Particulate (HEPA) filter cartridges.

GENERAL HYGIENE CONSIDERATIONS: Do not eat, drink, or smoke while using this product in dust form.

9. PHYSICAL AND CHEMICAL PROPERTIES

PROPERTY	VALUE	PROPERTY	VALUE
<i>Appearance:</i>		<i>Vapor Density (air = 1):</i>	Not applicable
<i>Odor:</i>	None	<i>Boiling Point (° F):</i>	
<i>Molecular Weight:</i>	Not applicable - Mixture	<i>Melting point:</i>	
<i>Physical State:</i>	Solid	<i>Specific gravity (g/cc):</i>	
<i>pH:</i>	Not applicable	<i>Bulk Density:</i>	
<i>Vapor Pressure (mm Hg):</i>	Not applicable	<i>Viscosity (cps):</i>	Not applicable
<i>Vapor Density:</i>	Not applicable	<i>Decomposition:</i>	Not applicable

<i>Solubility in Water (20° C):</i>	Negligible	<i>Evaporation Rate:</i>	Not Applicable
<i>Volatiles, Percent by volume:</i>	Not applicable	<i>Octanol/water partition coefficient:</i>	Unknown

10. STABILITY AND REACTIVITY

<u>STABILITY:</u>	Stable under normal temperatures and pressure
<u>CONDITIONS TO AVOID:</u>	Storage with strong acids or calcium hypochlorite.
<u>MATERIALS TO AVOID:</u>	Will react with strong acids to form hydrogen. Iron oxide dusts in contact with calcium hypochlorite evolve oxygen and may cause an explosion.
<u>HAZARDOUS DECOMPOSITION PRODUCTS:</u>	When heated to decomposition, may produce metal oxides and fumes. Inhalation of high concentrations of metal fumes may cause a condition known as "metal fume fever" which is characterized by flu-like symptoms.
<u>HAZARDOUS POLYMERIZATION:</u>	Will not occur.

11. TOXICOLOGICAL INFORMATION

POTENTIAL EXPOSURE ROUTES: For dust: ingestion, inhalation, and eye contact. For fume: inhalation and eye contact. The finished alloy metal is not hazardous.

ACUTE ANIMAL TOXICITY DATA:

For Product:		For Components	
Oral LD ₅₀			
Dermal LD ₅₀			
Inhalation LC ₅₀			
Irritation			

<u>SUBCHRONIC/ CHRONIC TOXICITY:</u>	No information for product.
<u>CARCINOGENICITY:</u>	
<u>MUTAGENICITY:</u>	

<u>REPRODUCTIVE, TERATOGENICITY, OR DEVELOPMENTAL EFFECTS:</u>	
<u>NEUROLOGICAL EFFECTS:</u>	
<u>INTERACTIONS WITH OTHER CHEMICALS WHICH ENHANCE TOXICITY:</u>	None known or reported.

12. ECOLOGICAL INFORMATION

ECOTOXICITY: No data is available on this product
MOBILITY: No Data
PERSISTANCE/DEGRADABILITY: No Data
BIOACCUMULATION: No Data

13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it DOES NOT meet the criteria of a hazardous waste as defined under 40 CFR 261, in that it does not exhibit the characteristics of hazardous waste of Subpart C, nor is it listed as a hazardous waste under Subpart D. Care must be taken to prevent environmental contamination from the use of this material. The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and non- hazardous wastes. This product may be a candidate for metal reclamation.

14. TRANSPORTATION INFORMATION

	U.S. DOT	RID/ADR	IMDG	IATA	IMO	Canada TDG
<u>PROPER SHIPPING NAME:</u>	Not regulated					
<u>HAZARD CLASS:</u>						
<u>UN NO.:</u>						
<u>PACKING GROUP:</u>						
<u>LABEL:</u>						
<u>REPORTABLE QUANTITY:</u>						

15. REGULATORY INFORMATION

US FEDERAL

Olin Brass SDS No.: 0010.0001	Phosphor Bronze Alloy
Revision Date: 6/1/15	Review Date: 1/1/17

TSCA	The components of this product are listed on the Toxic Substance Control Act inventory.				
CERCLA:					
SARA 313:					
SARA 313 Hazard Class:	<u>Health:</u>	Acute – No Chronic - No	<u>Fire:</u> None	<u>Reactivity:</u> None	<u>Release of Pressure:</u> None
SARA 302 EHS List:	None of the components of this product are listed.				

* RQ = Reportable Quantity

STATE RIGHT-TO-KNOW STATUS

Component	*CA Prop. 65	New Jersey	Pennsylvania	Massachusetts	Michigan
Iron	Not listed	Not listed	Not listed	Not listed	Not listed
Manganese	Not listed	X	X	X	Not listed

EUROPEAN REGULATIONS

This material in its massive solid form is not required to be labeled under EC regulations.

German WGK Classification: Unknown

CANADIAN REGULATIONS

DSL LIST: The components of this product are on the DSL or are exempt from reporting under the New Substances Notification Regulations.

IDL: Manganese

WHMIS: This product is considered to be a manufactured article and therefore not subject to WHMIS requirements.

16. OTHER INFORMATION

REVISIONS: Update to composition 1/1/04, revised format 6/1/15

PREPARED BY: Olin Brass

NOTICE: THE INFORMATION IN THIS SDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. THIS INFORMATION HAS BEEN PREPARED FOR THE GUIDANCE OF PLANT ENGINEERING, OPERATIONS AND MANAGEMENT AND FOR PERSONS WORKING WITH OR HANDLING THIS PRODUCT. OLIN BRASS BELIEVES THIS INFORMATION TO BE RELIABLE AND CURRENT AS OF THE DATE OF PUBLICATION, BUT MAKES NO WARRANTY THAT IT IS.

This document reviewed annually