

MATERIAL SAFETY DATA SHEET  
B2AL-1

UNITED STATES METAL POWDERS, INC.  
408 U.S. HIGHWAY 202  
FLEMINGTON, NJ 08822  
TELEPHONE: 908-782-5454

HMIS RATING:  
HEALTH: 1  
FLAMMABILITY: 0  
REACTIVITY: 0  
PERS. PROTECTION: E

SECTION I. MATERIAL IDENTIFICATION

Material Name: BRASS POWDER  
CAS Number: ALLOY/MIXTURE  
Item Number: B-103, B-107, B-108, B-109, B-176, B-177, B-178,  
B-182, B-183, B-183FM, PG03, PG03C, PG04, PG04A, PG06, PG08,  
RG03 RG03C, RG04A, RG06, RG08, RPG03, RPG03C,  
RPG06, RPG08

SECTION II. INGREDIENTS AND EXPOSURE LIMITS

Ingredient	CAS Number	%	ACGIH TLV		OSHA PEL	
			TWA	STEL	TWA	STEL
COPPER	7440-50-8	70-95	1	-	1	-
ZINC	7440-66-6	5-30	10*	-	10;	5*
ALUMINUM	7429-90-5	<2	10	-	15;	5

\* As Zinc oxide dust.

NOTE: "Total dust" and "Respirable fraction" OSHA PEL values are listed for Zinc and Aluminum.

SECTION III. PHYSICAL DATA

Appearance and Odor: Yellowish to tan color, odorless

	Cu	Zn	Al
Boiling Point:	4653 F 2567 C	1665 F 907 C	4766 F 2630 C
Evaporation Rate:	N/A	N/A	N/A
Vapor Pressure:	N/A	N/A	N/A
Specific Gravity:	8.92	7.14	2.17
Water Solubility (%):	INSOLUBLE	INSOLUBLE	INSOLUBLE
Melting Point:	1982 F 1083 C	787 F 419 C	1220 F 660 C
Vapor Density (air=1):	N/A	N/A	N/A
% Volatile by Volume:	N/A	N/A	N/A
Molecular Weight:	63.5	65.37	26.98

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SECTION IV. FIRE AND EXPLOSION DATA

	<u>Cu</u>	<u>Zn</u>	<u>Al</u>
<b>Flash Point:</b>	N/A	N/A	N/A
<b>Limits: LEL%:</b>	N/A	0.5 oz/ft <sup>3</sup>	0.035 oz/ft <sup>3</sup>
<b>UEL%:</b>	N/A	N/A	N/A

**Extinguishing media:** Foam, CO<sub>2</sub>, Dry Chemical, Water fog.

SECTION V. REACTIVITY DATA

**Material is stable. Hazardous polymerization will not occur.**

**Chemical incompatibilities:** Strong alkalis, chlorates, bromates, amines, mineral acids, ammonium salts, potassium nitrate, selenium, sodium peroxide, hydrogen peroxide, sulfur, tellurium, carbon disulfide, chlorine, chlorine trifluoride, chromic anhydride, fluorine, magnesium, iodates, oxides, nitrates, nitrites, chlorides, palladium, manganese, magnesium plus potassium chlorate, sodium carbonate, sulfates, diborane, chlorinated hydrocarbons.

**Hazardous decomposition products:** Decomposition may yield hydrogen and noxious copper and zinc compounds.

SECTION VI. HEALTH HAZARD INFORMATION

**Target organs:** Respiratory system, nasal septum, skin, eyes, gastrointestinal, kidneys, liver, cardiovascular system.

**Primary entry routes:** Inhalation, ingestion, skin or eye contact.

**Health effects:** Copper dusts and mists are eye and mucous membrane irritants, primary skin irritants and skin sensitizers. Acute exposure may cause metallic taste and nasal ulceration and perforation. Prolonged skin contact may produce sensitization dermatitis. Exposure may result in irritation and metal-fume fever, metallic taste, and discoloration of the skin and hair. Ingestion of copper compounds may cause vomiting and collapse. Acute poisoning is characterized by hemolysis, jaundice, anuria, hypertension, and convulsions. If exposed to excessively high temperatures, zinc metal fumes cause metal fume fever. Aluminum metallic powder is an eye and mucous membrane irritant.

**First Aid:**

**Eye contact:** Immediately wash the eyes with large amounts of water, occasionally lifting the lower and upper lids. Seek medical attention immediately. Contact lenses should not be worn.

**Skin contact:** Flush contaminated skin with water. Get medical attention if irritation occurs/persists.

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**Inhalation:** Move the exposed person to fresh air at once. If breathing has stopped, perform artificial respiration. Keep the affected person warm and at rest. Get medical attention as soon as possible.

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**Ingestion:** Emergency treatment - dilute with water or milk. Remove by gastric lavage (i.e. stomach tube) unless patient is vomiting. Get medical attention as soon as possible.

**SECTION VII. SPILL, LEAK AND DISPOSAL PROCEDURES**

**Spill/leak procedures:** Sweep gently to avoid dust cloud formation.

**Disposal:** Dispose of in accordance with local, state, and federal regulations.

**SECTION VIII. SPECIAL PROTECTION INFORMATION**

**Personal protective equipment:**

**Goggles:** Safety goggles with side shields, if needed.

**Gloves:** Required for those with extreme sensitivity.

**Respirator:** Wear supplied air respirator under confined or enclosed spaces, if needed.

**Workplace considerations:** Eye-wash fountain, soap and water wash station.

**Ventilation:** Sufficient ventilation, in volume and pattern, should be provided to keep air contamination below current applicable OSHA permissible limits.

**SECTION IX. SPECIAL PRECAUTIONS**

**Special handling/storage:** N/A

**SECTION X. CARCINOGENITY STATUS**

1. **NTP:** Not listed    2. **IARC:** Not listed    3. **OSHA:** Not listed

**SECTION XI. SECTION 313 SUPPLIER NOTIFICATION**

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372:

<u>CAS#</u>	<u>Chemical Name</u>	<u>Percent by Weight</u>
7440-50-8	Copper	70-95%
7440-66-6	Zinc	5-30%
7429-90-5	Aluminum	<2%

This information must be included in all MSDSs that are copied

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and distributed for this material.

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**SECTION XII. EMERGENCY CONTACT**

**CHEMTREC: (800) 424-9300** To be used "ONLY IN THE EVENT OF CHEMICAL EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT INVOLVING CHEMICALS".

**DISCLAIMER OF LIABILITY**

The information provided is based on data furnished to us by our suppliers or determined by us in our facilities at the time that this product was formulated. Although believed to be reliable, the information and products are intended for use by skilled persons at their own risk. Users should make their own determinations as to the suitability of the Product for their particular use or purpose. NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THIS INFORMATION. Seller assumes no responsibility for events resulting or damages incurred from the use of this product and any obligations between seller and buyer are to be controlled by the terms and conditions contained in seller's acknowledgement forms.

ISSUE DATE: 10/29/08  
REPLACES: 07/19/04

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