



COPPER BRONZE POWDERS SDN. BHD. (364813-X)

REVISION No.2 JUNE 2012	MATERIAL SAFETY DATA SHEET			MSDS NO: CBP:0610
1 – PRODUCT AND COMPANY IDENTIFICATION:				
Product Name: Chemical Symbol CAS No. EINECS No.	Atomized Aluminium Powder – Uncoated Al. 7429-90-5 231-072-3			
Suppliers Name & Address	CBP COPPER BRONZE POWDERS SDN. BHD. (364813-X) Unit 228, 2 nd Floor, Penang Plaza, 126 Jalan Burma, 10050 Penang, Malaysia Tel: (604) 2263869 Fax: (604) 8990257 E-Mail: laxmi@copperbronze.com.my Website: www.copperbronze.com.my			
2 – COMPOSITION INFORMATION ON INGREDIENTS :				
Ingredient	Wt. %	Exposure Limits (TWA)	CAS No.	UN No.
Aluminium	99 - 100	OHSA: 5MG/M ³ Respirable: 15 mg/m ³ dust ACGIH: gm/m ³ fume 10mg/m ³	7429-90-5	1396
3 – HAZARDS IDENTIFICATION:				
<p>Silver –gray powder without an odor.</p> <p>Aluminium Powder may be ignited by static discharge and burn at extremely high temperature. Once suspended in a dust-laden air cloud, it is readily ignited and very explosive.</p> <p>Do not use water to clean up spills. Use non-sparking tools for cleanup or natural bristle broom.</p> <p>Reacts violently with halogenated hydrocarbons and with oxidizers to produce heat.</p>				



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4 – FIRST AID MEASURES:		
<p>First Aid for Eyes: Immediately flush with water for 15 minutes. Seek medical attention if irritation persists.</p> <p>First Aid for Skin: Wash with soap and water.</p> <p>First aid for ingestion: Seek medical attention.</p> <p>First aid for inhalation: Remove to fresh air.</p>		
5 – FIRE FIGHTING MEASURES:		
<p>Suitable Extinguishing Agents: Gently smother burning material with dry sand.</p> <p>Unsuitable Extinguishing Agents: a) Water, b) CO₂ c) Foam d) Dry Chemical Powder</p> <p>Special Hazards caused by the substance, its products of combustion or resulting gases:</p> <ul style="list-style-type: none">a] Dust can combine with air to form an explosive mixture.b] Contact with water releases flammable gas (hydrogen)c] Avoid contact with organic substances.		
6 – ACCIDENTAL RELEASE MEASURES:		
<p>Leak and Spill Procedures:</p> <p>All spills should first be cleaned by scooping and mild brushing. Cleaning should be done with a soft brush or sponge, and pickup should be with non-sparking conductive scoops. Synthetic fibre bristle brush and plastic, or other non-conductive scoops should not be used because of their tendency to accumulate strong static charges. Avoid action that would create dust-laden cloud or cause powder to disperse in air. If vacuum cleaner is used, its piping, suction hose, and tools should be electrically conductive and should be grounded to prevent static electric sparks. Only vacuum cleaners specifically approved for use with reactive combustible metal dust should be used. Standard commercial industrial vacuum cleaners should not be used, as they are not safe with combustible metals. The vacuum system's electrical equipment should be suitable for Class II, Group E.</p>		



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7 – HANDLING & STORAGE:		
<p>Handling:</p> <p>Avoid generation of dust clouds. Avoid sources of sparks or other sources of ignition. Protect against static electricity. Keep work area clean. Avoid accidental contact with reactive materials and chemicals – oxidizers etc. Use non-sparking tools.</p> <p>Storage:</p> <p>Store in the supplied container until used. Keep in closed dry room or store. The area should be suitably marked to indicate the presence of an ignitable dust. No smoking – warning should be displayed. Avoid sparks or other source of ignition. Keep area clean and avoid spillage. Do not store with reactive materials.</p>		
8 – EXPOSURE CONTROLS / PERSONAL PROTECTION		
<p>Engineering controls:</p> <p>If ventilation is used to control aluminium dust exposure, special ventilation procedures may be necessary to avoid explosion hazards. Aluminium dust may accumulate in ventilation ducts and cause explosion hazards.</p> <p>Respiratory protection:</p> <p>If exposure Limits (TLVs, PELs. Etc.) are exceeded, use NIOSH/MSHA – approved respirator for dust/fume/mist.</p> <p>Skin/Body Protection:</p> <p>Use gloves as needed. Neoprene or Nitrile gloves recommended. Recommended FR 8 or equivalent full length pants and jackets along with static conductive safety shoes.</p> <p>Eye Protection: Safety glasses, goggles, face shield, as needed,</p>		



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9 - PHYSICAL AND CHEMICAL PROPERTIES:		
Physical Form	- Powder - Irregular Particles.	
Color	- Grey.	
Odor	- Odorless.	
P.H.	- N/A	
Boiling Temperatre	- 2467 °C	
Melting Temperature	- 660 °C	
Flash Point	- N/A	
Autoflammability	- Product is not self igniting.	
Explosive Properties	- Fine Aluminium Powder may be explosive if dispersed into a dust cloud in air in the presence of a source of ignition. Lower Explosive Limit (LEL) – 40 gm/m ³	
Minimum Ignition Temperature.	- Cloud 650 °C - Layer 760 °C	
Oxidizing Properties	- Will react exothermically if mixed with a strong oxidizing substance and ignited.	
Real Density	- 2.7 gm/cm ³	
Solubility	- Insoluble in water	
10 – STABILITY & REACTIVITY:		
Stability: Stable under normal condition of use. Conditions of Reactivity: Aluminium powder oxidizes when heated at a temperature dependent rate. It reacts violently with halogenated hydrocarbons and with oxidizers to produce heat. It reacts with water and slowly generates heat and hydrogen, while hydrogen gas forms from the reaction with some acids and alkalis. Hazardous Polymerization: None.		



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<p>Incompatibles: Water, mineral acids such as nitric and sulfuric, strong oxidizing agents, alkalis and halogenated compounds.</p> <p>Decomposition Products: Aluminium Oxide.</p>		
<p>11 – TOXICOLOGICAL INFORMATION:</p>		
<p>LD50 of Product: - ND Aluminium</p> <p>Sensitization to product - None known Irritancy of product - Mild Reproductive effects - None known Teratogenicity - None known Mutagenicity - None known Synergistic Materials - None known</p>		
<p>12 – ECOLOGICAL INFORMATION:</p>		
<p>Ecotoxicological Information: This product may cause adverse environmental effects. Employ management practices which prevent this material from contacting storm water, entering waterways, or otherwise impacting plant and animal species.</p> <p>Distribution: ND</p> <p>Chemical Fate Information: ND</p>		
<p>13 – DISPOSAL CONSIDERATIONS:</p>		
<p>Waste disposal Method: For disposal of this material as non-hazardous, consult state and local industrial solid waste regulations or contact their implementing authorities for guidance.</p>		
<p>14 – TRANSPORT INFORMATION:</p>		
<p>Transport over land ADR/RID class - 4.3</p> <p>Transport over sea IMDG class - 4.3</p> <p>Transport over ICAO/IATA class - 4.3</p> <p>Packaging group - II</p>		



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<i>15 – REGULATORY INFORMATION</i>		
<p>Label: UN Classification – 4.3 Flammable solids (Dangerous when wet)</p> <p>Risks: Risk Phrase – 10,15 R – 10 – Flammable R – 15 – Contact with water liberates extremely flammable gas.</p> <p>Safety: Safety Phrase – 7/8, 43.6 S – 7/8 – Keep container tightly closed and dry. S – 43.6 – In case of fire, use sand – <u>NEVER USE WATER.</u></p>		
<i>16 OTHER INFORMATION:</i>		
All statements, technical information and recommendations contained herein are based on the present state of our knowledge and believes to be reliable, but the accuracy or completeness thereof is not guaranteed and no warranty of any kind is made with respect thereto. Since this Company shall have no control on the use of the product described herein, the Company assumes no liability for loss or damage incurred from the proper or improper use of such product.		