

# SAFETY DATA SHEET

Product Name **BRONZE POWDER**

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Supplier name** AUSTRALIAN METAL POWDERS SUPPLIES  
**Address** 32 Carrington Road, Guildford, NSW, 2161, AUSTRALIA  
**Telephone** (02) 9681 6155  
**Fax** (02) 9681 6092  
**Emergency** 13 11 26 (Poisons Information Centre)  
[sales@metalpowders.com.au](mailto:sales@metalpowders.com.au)  
<http://www.metalpowders.com.au>  
**Synonym(s)** AMPS BRONZE POWDER • POWDER BRONZE  
**Use(s)** METALLURGY APPLICATIONS • SURFACE COATING  
**SDS date** 29 October 2014

## 2. HAZARDS IDENTIFICATION

**CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA**

**Risk Phrases**

R36/37/38 Irritating to eyes, respiratory system and skin.

**Safety Phrases**

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

**NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE**

<b>UN Number</b>	None Allocated	<b>Transport Hazard Class</b>	None Allocated
<b>Packing Group</b>	None Allocated	<b>Hazchem Code</b>	None Allocated

## 3. COMPOSITION/ INFORMATION ON INGREDIENTS

Ingredient	CAS Number	EC Number	Content
COPPER	7440-50-8	231-159-6	>60%
TIN	7440-31-5	231-141-8	<30%

## 4. FIRST AID MEASURES

**Eye** If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.

**Inhalation** If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.

**Skin** If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.

**Ingestion** For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.

**Advice to doctor** Treat symptomatically.

**First aid facilities** Eye wash facilities and safety shower should be available.

**5. FIRE FIGHTING MEASURES**

<b>Flammability</b>	Non flammable. May evolve toxic gases (copper oxides) when heated to decomposition.
<b>Fire and explosion</b>	Evacuate area and contact emergency services. May cause fire or explosion in contact with incompatible materials (see Reactivity). Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Bund and contain all residues to avoid environmental contamination.
<b>Extinguishing</b>	Use an extinguishing agent suitable for the surrounding fire.
<b>Hazchem code</b>	None Allocated

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal precautions</b>	Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS.
<b>Environmental precautions</b>	Prevent product from entering drains and waterways.
<b>Methods of cleaning up</b>	Contain spillage, then collect and place in suitable containers for disposal. Avoid generating dust.
<b>References</b>	See Sections 8 and 13 for exposure controls and disposal.

**7. STORAGE AND HANDLING**

<b>Storage</b>	Store in a cool, dry, well ventilated area, removed from incompatible substances and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use.
<b>Handling</b>	Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****Exposure standards**

Ingredient	Reference	TWA		STEL	
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Copper (fume)	SWA (AUS)	--	0.2	--	--
Copper, dusts & mists (as Cu)	SWA (AUS)	--	1	--	--
Tin, metal	SWA (AUS)	--	2	--	--

<b>Biological limits</b>	No biological limit allocated.
<b>Engineering controls</b>	Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Maintain dust levels below the recommended exposure standard.

**PPE**

<b>Eye / Face</b>	Wear dust-proof goggles.
<b>Hands</b>	Wear PVC or rubber gloves.
<b>Body</b>	Not required under normal conditions of use.
<b>Respiratory</b>	At high dust levels, wear a Class P1 (Particulate) respirator.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	YELLOW TO GOLD TO BROWN COLOURED METALLIC POWDER
<b>Odour</b>	SLIGHT ODOUR
<b>Flammability</b>	NON FLAMMABLE

**Product Name**      **BRONZE POWDER**

Flash point	NOT RELEVANT
Boiling point	NOT AVAILABLE
Melting point	> 750°C
Evaporation rate	NOT AVAILABLE
pH	NOT AVAILABLE
Vapour density	NOT AVAILABLE
Specific gravity	2.8 to 3.8
Solubility (water)	INSOLUBLE
Vapour pressure	NOT AVAILABLE
Upper explosion limit	NOT RELEVANT
Lower explosion limit	NOT RELEVANT
Partition coefficient	NOT AVAILABLE
Autoignition temperature	NOT AVAILABLE
Decomposition temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive properties	NOT AVAILABLE
Oxidising properties	NOT AVAILABLE
% Volatiles	NOT AVAILABLE

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**10. STABILITY AND REACTIVITY**

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<b>Chemical stability</b>	Stable under recommended conditions of storage.
<b>Conditions to avoid</b>	Avoid heat, sparks, open flames and other ignition sources.
<b>Material to avoid</b>	Incompatible with oxidising agents (e.g. hypochlorites) and acids (e.g. nitric acid). Reacts violently with chlorine, fluorine, ethylene oxide, acetylene and hydrogen sulphide.
<b>Hazardous Decomposition Products</b>	May evolve toxic gases (copper oxides) when heated to decomposition.
<b>Hazardous Reactions</b>	Polymerization will not occur.

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**11. TOXICOLOGICAL INFORMATION**

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<b>Health Hazard Summary</b>	May be harmful. Use safe work practices to avoid dust inhalation. Chronic exposure may result in liver, kidney and blood damage. Use safe work practices to avoid eye or skin contact and dust generation - inhalation. Over exposure to dust/fume may result in "metal fume fever" with delayed symptoms, including breathing difficulties. Individuals with pre-existing respiratory impairment (e.g. asthmatics) may be more susceptible to adverse health effects.
<b>Eye</b>	Irritant. Contact may result in irritation, lacrimation, pain and redness.
<b>Inhalation</b>	Irritant. Over exposure to dust or fumes may result in irritation of the nose and throat with ulceration of the nasal septum. Inhalation of fumes (if welding) may result in metal fume fever, a flu-like illness with dry throat, cough, chills, tight chest, weakness and muscular aches. Product form reduces the risk of inhalation.
<b>Skin</b>	Low irritant. Allergic contact dermatitis has been reported, although rare.
<b>Ingestion</b>	May be harmful. Ingestion may result in nausea, vomiting, abdominal pain and diarrhoea. Ingestion of large quantities may result in liver, kidney and blood damage. Ingestion is considered unlikely due to product form.
<b>Toxicity data</b>	COPPER (7440-50-8) LD50 (skin) > 2000 mg/kg (rat)

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**12. ECOLOGICAL INFORMATION**

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<b>Toxicity</b>	No information provided.
<b>Persistence and degradability</b>	No information provided.
<b>Bioaccumulative potential</b>	No information provided.
<b>Mobility in soil</b>	No information provided.
<b>Other adverse effects</b>	Soluble copper compounds are highly toxic to aquatic and plant life. Insoluble copper compounds are significantly less environmentally hazardous. Positive potential for food chain accumulation.

**13. DISPOSAL CONSIDERATIONS**

<b>Waste disposal</b>	For small amounts, cover with moist sand, vermiculite or similar to avoid dust hazard and dispose of to an approved landfill site. Contact the manufacturer/supplier for additional information if disposing of large quantities (if required).
<b>Legislation</b>	Dispose of in accordance with relevant local legislation.

**14. TRANSPORT INFORMATION****NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE, IMDG OR IATA**

	<b>LAND TRANSPORT (ADG)</b>	<b>SEA TRANSPORT (IMDG / IMO)</b>	<b>AIR TRANSPORT (IATA / ICAO)</b>
<b>UN Number</b>	None Allocated	None Allocated	None Allocated
<b>Proper Shipping Name</b>	None Allocated	None Allocated	None Allocated
<b>Transport Hazard Class</b>	None Allocated	None Allocated	None Allocated
<b>Packing Group</b>	None Allocated	None Allocated	None Allocated

**Environmental hazards** No information provided

**Special precautions for user**

**Hazchem code** None Allocated

**15. REGULATORY INFORMATION**

**Poison schedule** A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

**Inventory Listing(s)** **AUSTRALIA: AICS (Australian Inventory of Chemical Substances)**  
All components are listed on AICS, or are exempt.

**16. OTHER INFORMATION**

**Additional information** EXPOSURE STANDARDS - TIME WEIGHTED AVERAGES: Exposure standards are established on the premise of an 8 hour work period of normal intensity, under normal climatic conditions and where a 16 hour break between shifts exists to enable the body to eliminate absorbed contaminants. In the following circumstances, exposure standards must be reduced: Strenuous work conditions; hot, humid climates; high altitude conditions; extended shifts (which increase the exposure period and shorten the period of recuperation).

**PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:**

The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

**HEALTH EFFECTS FROM EXPOSURE:**

It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a ChemAlert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

**Product Name**      **BRONZE POWDER**

<b>Abbreviations</b>	ACGIH	American Conference of Governmental Industrial Hygienists
	CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
	CNS	Central Nervous System
	EC No.	EC No - European Community Number
	GHS	Globally Harmonized System
	IARC	International Agency for Research on Cancer
	LC50	Lethal Concentration, 50% / Median Lethal Concentration
	LD50	Lethal Dose, 50% / Median Lethal Dose
	mg/m <sup>3</sup>	Milligrams per Cubic Metre
	OEL	Occupational Exposure Limit
	PEL	Permissible Exposure Limit
	pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
	ppm	Parts Per Million
	REACH	Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals
	STEL	Short-Term Exposure Limit
	STOT-RE	Specific target organ toxicity (repeated exposure)
	STOT-SE	Specific target organ toxicity (single exposure)
	SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
	SWA	Safe Work Australia
	TLV	Threshold Limit Value
	TWA	Time Weighted Average

**Revision history**

Revision	Description
1.2	Standard SDS Review
1.1	Standard SDS Review
1.0	Initial SDS creation

**Report status**

This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer, importer or supplier or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer, importer or supplier.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

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**Revision:** 1.2  
**SDS Date:** 29 October 2014

**End of SDS**