

MATERIAL SAFETY DATA SHEET – BRASS POWDER

This MSDS summarises our best knowledge of the health and safety hazard information of the products and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company. All information contained in this MSDS is as accurate and up to date as possible. No warranty expressed or implied is made as to its accuracy, reliability or completeness.

STATEMENT OF HAZARDOUS NATURE Hazardous according to Worksafe Australia criteria

COMPANY DETAILS

Date: 05/03/2003
Company: Australian Metal Powders Supplies Pty Ltd ABN 90 074 452 556
Address: PO Box 477, Merrylands, NSW, 2160, Australia
Telephone: 02 9681 6155
Emergency: 13 11 26 Australian Poisons Centre
Fax: 02 9681 6092

IDENTIFICATION

CHEMWATCH HAZARD RATING

Flammability: 0
Health Hazard: 1
Body Contact: 1
Reactivity: 0

TRADE NAMES

Leaded brass powder
Copper-zinc-lead alloy powder

MATERIAL DETAILS

CAS RN No(s):	None	POISONS SCHEDULE:	None
NIOSH No:	Not available	HAZCHEM:	None
UN No:	None	SUB RISK:	None
DANGEROUS G. CLASS:	None	EPG:	None
PACKAGING GROUP:	None	IMDG PAGE:	None
IMO CLASS:	None		
LABEL:	No class label assigned		

SHIPPING NAME None

APPEARANCE

Brass coloured metallic solid as a size graded, pourable powder. No odour. Insoluble in water.

PHYSICAL PROPERTIES

Molecular Weight:	Not applicable	Vapour Pressure (kPa):	Not applicable
Boiling Range(C):	Not available	Volatile Component (%Vol):	Not applicable
Melting Range(C):	930-1000 estd.	Relative Vapour Density**:	Not available
Specific Gravity*:	3.6 app.density	Flash Point(C):	Not applicable
Water Solubility:	Immiscible	Lower Explosive Limit (%):	Not available
pH (as supplied):	Not applicable	Upper Explosive Limit (%):	Not available
pH (1% Solution):	Not applicable	Autoignition Temp(C):	Not available
Evaporation Rate:	Not applicable	Decomposition Temp(C):	Not applicable
State:	Divided solid		

Legend * Water=1, ** Air=1

INGREDIENTS

NAME	CAS RN	%
Mixture of		
copper	7440-50-8	>66
zinc	7440-66-6	26-31
lead	7439-92-1	1.4-2.8
On heating to fusion may		
copper fume	7440-50-8	<1
zinc oxide fume	1314-13-2	<1

USE

Powder metallurgy and chemical industry applications.

SYNONYMS

Non-ferrous metal powders
bearing metal
water atomise brass powder

HEALTH HAZARD

ACUTE HEALTH EFFECTS

SWALLOWED

The material is harmful if swallowed.
Considered an unlikely route of entry in commercial/industrial environments.

EYE

Particulate/dust is regarded as discomforting and abrasive to the eyes.

SKIN

The material may be slightly irritating and abrasive to the skin. The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to vesiculation, scaling and thickening of the epidermis. Histologically there may be intercellular oedema of the spongy layer and intracellular oedema of the epidermis.

INHALED

The dust is irritating to the upper respiratory tract and may be harmful if inhaled. Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.

Copper poisoning following exposure to copper dusts and fume may result in headache, cold sweat and weak pulse. Capillary, kidney, liver and brain damage are longer-term manifestations of such poisoning.

CHRONIC HEALTH EFFECTS

Principal routes of exposure are usually by skin contact, inhalation of generated dust and inhalation of fumes from heated material. Large oral doses may cause nausea, vomiting, abdominal pain, metallic taste and diarrhoea. If vomiting does not occur immediately, systematic copper poisoning may occur; capillary damage, headache, cold sweat, weak pulse, kidney and liver damage may be the result of poisoning.

Nasal ulcerations with resultant nose-bleed may occur following inhalation of fine dusts. Chronic exposure to copper dusts may result in runny nose, irritation of mucous membranes and atrophic changes with resultant dementia.

Pre-existing skin, kidney, liver and pulmonary disorders may be aggravated by exposure. Wilson's disease is also aggravated.

Lead is a cumulative poison with adverse effects in pregnancy (NIOSH/TIC).

FIRST AID

SWALLOWED

If poisoning occurs, contact a doctor or Poisons Information Centre.

If swallowed, do NOT induce vomiting. Give a glass of water.

EYE

If this product comes in contact with the eyes:

Immediately hold the eyes open and wash with fresh running water.

Ensure irrigation under the eyelids by occasionally lifting the upper and lower lids. If pain persists or recurs seek medical attention.

Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

If product comes in contact with the skin: Immediately remove all contaminated clothing, including footwear (after rinsing with water)

Wash affected areas thoroughly with water (and soap if available).

Seek medical attention in event of irritation.

INHALED

If dust is inhaled, remove to fresh air.

Encourage patient to blow nose to ensure clear breathing passages. Rinse mouth with water. Consider drinking water to remove dust from throat. If irritation persists seek medical attention.

If fumes or combustion products are inhaled: Remove to fresh air. Lay patient down. Keep warm and rested. If available, administer medical oxygen by trained personnel. If breathing is shallow or stopped, ensure clear airway and apply resuscitation. Transport to hospital, or doctor, without delay.

ADVICE TO DOCTOR

1. Unless extensive vomiting has occurred empty the stomach by lavage with water, milk, sodium bicarbonate solution or a 0.1% solution of potassium ferrocyanide (the resulting copper ferrocyanide is insoluble).
2. Administer egg whites and other demulcents.
3. Maintain electrolyte and fluid balances.
4. Morphine or meperidine (Demerol) may be necessary for control of pain.
5. If symptoms persist or intensify (especially circulatory collapse or cerebral disturbances, try BAL intramuscularly or penicillamine in accordance with the supplier's recommendations.
6. Treat shock vigorously with blood transfusions and perhaps vasopressor amines.
7. If intravascular haemolysis becomes evident protect the kidneys by maintaining a diuresis with mannitol and perhaps by alkalinising the urine with sodium bicarbonate.
8. It is unlikely that methylene blue would be effective against the occasional methaemoglobinemia and it might exacerbate the subsequent haemolytic episode.
9. Institute measures for impending renal and hepatic failure.
[GOSSELIN, SMITH & HODGE: Commercial Toxicology of Commercial Products].
10. A role for activated charcoals or emesis is, as yet, unproven
11. In severe poisoning CaNa₂EDTA has been proposed.
[ELLENHORN & BARCELOUX: Medical Toxicology].

TOXICITY AND IRRITATION

Not available. Refer to individual constituents.

LEAD

TOXICITY

Oral (woman) TDLo: 450 mg/kg/6 years

IRRITATION

COPPER FUME

TOXICITY

Oral (human) TDLo: 0.012mg/kg

Substance has been investigated as a tumorigen and reproductive effector:

In rodents is an equivocal tumorigen by RTECS criteria.

IRRITATION

No data available

unless otherwise specified data extracted from RTECS –
Register of Toxic Effects of Chemical Substances

TOXICITY

COPPER

Oral (human) TDLo: 0.12mg/kg

WARNING: Inhalations of high concentrations of copper fume may cause "metal fume fever", an acute industrial disease of short duration.

Symptoms are tiredness, influenza like respiratory tract irritation with fever.

IRRITATION

Nil reported

PRECAUTIONS FOR USE

EXPOSURE STANDARDS

None assigned for mixture.

Refer to individual constituents.

COPPER

copper dusts and mists, as Cu (A.Wt: 63.54)

ES TWA: 1 mg/m³

TLV TWA: 1 mg/m³

NOTICE OF INTENDED CHANGE

TLVTWA 1 mg/m³ (copper & inorganic compounds, mist & inhalable particulate)
copper fume, as Cu

ES-TWA: 0.2 mg/m³

TLV-TWA: 0.2 mg/m³

NOTICE OF INTENDED CHANGE

TLV TWA 0.05mg/m³ (copper & inorganic compounds, fume & respirable particulate)

COPPER FUME

ES* TWA: 0.2 mg/m³

TLV* TWA: 0.2 mg/m³

EXPOSURE STANDARDS FOR MIXTURE

"Worst Case" computer aided prediction of spray/mist or fume/dust components and concentration:

Composite Exposure Standard for Mixture (TWA): 0.2000 mg/m³.
Operations which produce a spray/mist or fume/dust, introduce particulates to the breathing zone.

If the breathing zone concentration of ANY of the components listed below is exceeded, "Worst Case" considerations deem the individual to be over-exposed.

Component	Breathing Zone Conc. mg/m ³	Mixture Conc (%)
copper fume	0.2000	1.0

ENGINEERING CONTROLS

Special ventilation requirements apply for processes which result in the generation of aluminium, copper, fluoride, manganese or zinc fume.

1. For work conducted outdoors and in open work spaces, the use of mechanical (general exhaust or plenum) ventilation is required as a minimum. (Open work spaces exceed 300 cubic metres per welder)
2. For indoor work, conducted in limited or confined work spaces, use of mechanical ventilation by local exhaust systems is mandatory. (In confined spaces always check that oxygen has not been depleted by excessive rusting of steel or snowflake corrosion of aluminium.

Local exhaust systems must be designed to provide a minimum capture velocity

PERSONAL PROTECTION

at the fume source, away from the worker, of 0.5 metre/second.

EYE

Chemical goggles. Full face shield.

Contact lenses pose a special hazard; soft lenses may absorb irritants and all lenses concentrate them.

HANDS/FEET

PVC gloves. When handling hot material, wear heat resistant, elbow length gloves, spats. Safety footwear.

OTHER

When handling hot materials wear heat resistant/reflective apron. Overalls. Eyewash unit. Ensure there is ready access to a safety shower. Equipment should be kept clean and in working-order.

RESPIRATOR

Protection Factor		Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
10	x ES	P2 Air-line*	-----	-----
50	x ES	Air-line**	P2	PAPR-P2
100	x ES	-----	P3	-----
		-----	Air-line*	-----
100+	x ES	-----	Air-line**	PAPR-P3

*- Negative pressure demand **- Continuous flow.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required. For further information, consult site specific CHEMWATCH data (if avail), or your Occupational Health and Safety Advisor.

HANDLING PROCEDURES

For manual handling of metals at room temperature:
 Avoid generating dust.
 Limit all unnecessary personal contact.
 Wear protective clothing when risk of exposure occurs.
 Use a well-ventilated area. When handling DO NOT eat, drink or smoke.
 Always wash hands with soap and water after handling.
 Avoid physical damage to containers. Use good occupational work practice.
 Observe manufacturer's storing and handling recommendations.
 Work clothes should be laundered separately: NOT at home.

CONDITION CONTRIBUTING TO INSTABILITY

Presence of incompatible materials.
 Product is considered stable. Hazardous polymerisation will not occur.

SAFE HANDLING

STORAGE

SUITABLE CONTAINER

Check that containers are clearly labelled.
 Packaging as recommended by manufacturer.

STORAGE INCOMPATIBILITY

Segregate from acids.

STORAGE REQUIREMENT

Store away from foodstuff containers.

Store away from incompatible materials.
DO NOT store near acids, or oxidising agents.
Observe manufacturer's storing and handling recommendations.

TRANSPORTATION

No restrictions.

SPILLS

MINOR SPILLS

Clean up all spills immediately.
Avoid generating dust.
Vacuum up or wet mop up.
Note: Vacuum cleaner must be fitted with an exhaust micro filter (HEPA type).
Place in suitable containers for disposal.

MAJOR SPILLS

Clean all spills immediately.
Wear protective clothing, safety glasses, dust mask, gloves.
Secure load if safe to do so. Bundle/collect recoverable product.
Use dry clean up procedures and avoid generating dust.
Vacuum up. Water may be used to prevent dusting.
Collect remaining material in containers with covers for disposal.
Flush spill area with water.

DISPOSAL

Recycle wherever possible.
Consult manufacturer for recycling options.
Consult State Land Waste Management Authority for disposal.

FIRE FIGHTERS REPORT

EXTINGUISHING MEDIA

There is no restriction on the type of extinguisher which may be used.

FIRE FIGHTING

Alert Fire Brigade and tell them location and nature of hazard.
Use fire-fighting procedures suitable for surrounding area.
Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or watercourses.
If safe to do so, remove containers from path of fire.
Cool fire exposed containers with water spray from a protected location.
Equipment should be thoroughly decontaminated after use.

FIRE/EXPLOSION HAZARD

Non-combustible.
Not considered to be a significant fire risk, however containers may burn.

FIRE INCOMPATIBILITY

No known incompatibility with normal range of industrial materials.

ENVIRONMENTAL

No Data

IMPORTANT NOTE:

The information contained in this Material Safety Data Sheet (MSDS) is believed by Australian Metal Powders Supplies (AMPS) to be accurate at date of issue, but is subject to change without notice, and no warranty, expressed or implied, is made as to its accuracy,

It is the responsibility of the user to ensure that this document is current. It is the responsibility of every person dealing with product referred to herein to review the MSDS and assess the potential implications for any particular use of the material and the appropriate precautions which should be adapted, including making the MSDS available to all users. As a supplier cannot anticipate or control the conditions under which the products are used, stored, transported, handled or disposed of (its "use" which include "misuse") AMPS accepts no liability whatever for damage or injury, however caused, from use of our products or the information contained herein.

According, any person using this product undertakes such use voluntarily, assumes all risk associated with the use, and accepts responsibility for ensuring that appropriate safe practices are adopted. Any purchaser of this product from AMPS agrees to release and indemnify AMPS to the extent possible at law in respect of any liability which may arise directly or indirectly from use of the product.

If clarification or further information is needed to ensure that an appropriate assessment of the product can be made, the user should contact AMPS.

CONTACT

AUSTRALIAN POISONS INFORMATION CENTRE

24 HOUR SERVICE: 13 11 26

POLICE OR FIRE BRIGADE: 000 (exchange): -1100

NEW ZEALAND POISONS INFORMATION CENTRE

Dunedin: (03) 479 1200 (Normal Hours)

(03) 474 0999 (Emergency)

CHEMWATCH FULL REPORT

CHEMWATCH 66046

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