

Minchali metal

MSDS CS191 CS210

MSDS

Minchali MSDS No :	MCL001
Revisions No :	1
Revisions Date :	05-13-2003

1. PRODUCT AND COMPANY IDENTIFICATION

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Product name :	PHOSPHOR BRONZE ALLOYS		
Synonyms :	CS191 - CS210		
chemical name :	Cu-Sn-P Alloy		
Family :	Metal alloy		
Company name :	Minchali metal industry Co.,Ltd		
Company address :	No.11 Pei Yuan Rd, Chung-Li Industrial District, Chung-Li City, Tao-Yuan County, Taiwan		
Company tel :	8863-4519898	Fax :	8863-4514870
Company Internet add :	www.minchali.com.tw		
Company Emerging Tel :	8863-4519898		

2. COMPOSITION/INFORMATION ON INGREDIENTS

Components :	Copper(Cu)
CAS Name :	7440-50-8
By weight :	CS191 (Cu+Sn+P)>99.5% CS210 (Cu+Sn+P)99.7%

Components :	TIN(Sn)
CAS Name :	7440-31-5
By weight :	CS191 5.5-7.0% CS210 7.0-9.0%

Components :	P
CAS Name :	7723-14-0
By weight :	0.03-0.35%

OHSA : In solid form, not hazardous; Dust of fume : irritant**In solid form, this material is not hazardous. Dust and fumes are hazardous materials.**

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3. Hazards Identification**WARNING!**

EXPOSURE TO DUST OR FUMES CAN CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION ONLY WITH ADEQUATE VENTILATION. AVOID CONTACT WITH EYES, SKIN AND CLOTHING. WASH THOROUGHLY AFTER HANDLING.

HAZARD RATINGS (for dust or fume) Degree of hazard (0=low, 4=extreme)

Hazardous Materials Identification System (HMIS)

Health: 1 Flammability: 0 Physical Hazard: None

ACUTE EFFECTS:

Eye: Dust or fume can cause irritation consisting of redness, swelling and pain.

May cause conjunctivitis with repeated exposures.

Skin: Material not expected to be absorbed through the skin. Contact with dust may cause mild irritation consisting of redness and/or swelling.

Inhalation: Inhalation of high concentrations of metallic copper dusts or fumes may cause nasal irritation and/or nausea, vomiting and stomach pain. The metal fume may also produce influenza-like symptoms, known as metal fume fever. Symptoms of this reaction may include metallic taste, runny nose, nausea, fever and chills. These effects usually disappear within 24 hours.

Ingestion: Ingestion of large amounts of dust may cause nausea, diarrhea and or stomach pain.

4. FIRST AID MEASURES

For fume and dust

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.

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5. FIRE FIGHTING MEASURES

Explosive :	No
Combustible :	No
Flammable :	No
Burning Rate of Material :	Not applicable
Auto ignition Temp :	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 of soda ash. Use fire-extinguishing media appropriate to fight surrounding fire.

SPECIAL FIREFIGHTING PROCEDURES:

None required.

6. ACCIDENTAL RELEASE MEASURES

In dust form, this product may be an explosion hazard. Remove all sources of ignition. Dust of fume may be suppressed by the use of a local exhaust system.

AIR :	Not applicable
WATER :	Not applicable
EARTH :	Not applicable

7. HANDLING AND STORAGE**HANDLING:**

Handling: Avoid dispersion of dust in air

Storage:Do not store at temperatures above: Not Applicable
Avoid to store in acid or alkaline environment.**8. EXPOSURE CONTROLS/PROTECTION**

		OSHA(PEL)		ACGIH(TLV)	
		ppm	mg/m ³	ppm	mg/m ³
Cu :					
	Dust	NA	0.1	NA	0.2
	Fume	NA	1	NA	1
Sn :					
	Dust	NA	2	NA	2
P :					
	Dust	NA	0.1	NA	0.1
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.				

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SKIN PROTECTION :	Wear impervious (cut-resistant) gloves and other protective clothing (aprons, coveralls) as appropriate to prevent skin contact when using this product. If generating a dust, wash thoroughly after handling, especially before eating, drinking, or smoking.
RESPIRATORY PROTECTION :	Respiratory protection not normally needed. If significant dusting occurs or fumes are generated 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

Appearance - Physical State :	Red metallic - Solid
Melting point :	1000-1075 °C
Boiling Point :	Not applicable
Specific gravity(g/cc) :	8.84
Vapor Density :	Not applicable
Physical State :	Not applicable
PH :	Not applicable

10. STABILITY AND REACTIVITY

STABILITY: Stable under normal temperatures and pressure.

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.

For Product: (dust or fume)	
Oral LD ₅₀	Believed to be moderately toxic
Dermal LD ₅₀	Believed to be > 2g/kg
Inhalation LC ₅₀	Believed to be slightly to moderately toxic
Irritation	Believed to be a respiratory irritant

For Components: (Copper)	
Oral LD ₅₀	3.5mg/kg(mouse, intraperitoneal)
Dermal LD ₅₀	375mg/kg(rabbit, subcutaneous)
Inhalation LC ₅₀	No data
Irritation	Respiratory irritant

For Components: (Tin)	No data
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12. ECOLOGICAL INFORMATION

No data is available on this product. Individual constituents are as follows:

Copper: The toxicity of copper to aquatic organisms varies significantly not only with the species, but also with the physical and chemical characteristics of the water, such as its temperature, hardness, turbidity and carbon dioxide content. Copper concentrations varying from 0.1to 1.0mg/l have been found by various investigators to be not toxic for most fish. However, concentrations of 0.015to 3.0mg/l have been reported as toxic, particularly in soft water to many kinds of fish, crustaceans, mollusks, insects, and plankton.

MOBILITY: No data

PERSISTENCE / 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. Care must be taken to prevent environmental contamination from the use of this material. This product may be a candidate for metal reclamation.

14. TRANSPORT INFORMATION

Care must be taken to prevent water unitary, falling from transportation.

15. REGULATORY INFORMATION

US FEDERAL

TSCA	The components of this product are listed on the Toxic Substance Control Act inventory				
CERCL	Copper, R.O=5000 lbs. No reporting is required if diameter of the pieces of metal is equal to or exceeds 100 micrometers (0.0004inches).				
SARA 313	Copper				
SARA 313 Hazard Class	Health: For dust or fume only	Acute- Yes, Chronic-Yes,	Fire: None	Reactivity: None	Release of Pressure: None

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16. OTHER INFORMATION

USA/OHSA : Occupational Safety & Health Administration
USA/ACGIH Guide to protective Clothing, Cincinnati, OH: American Conference of Government Industrial Hygienists, 1987

NOTICE: THE INFORMATION IN THIS MSDS 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. THIS MSDS INFORMATION IS RELIABLE AND CURRENT AS OF THE DATE OF PUBLICATION, BUT MAKES NO WARRANTY THAT IT IS.

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