

Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Leadframe with Silver Plating (A194/C194/K65)
 Base Material: Copper Alloy UNS No.: C19400
 Manufacturer Name: Possehl Electronics Hong Kong Limited
 Address: 3/F - 5/F, Tsuen Wan Industrial Centre, 220-248 Texaco Road,
 Tsuen Wan, New Territories, Hong Kong
 Telephone No.: 852 6 2697 8233
 Fax No.: 852 6 2694 9100
 Recommended use of the chemical and restrictions on use
 Recommended use: IC device
 Restrictions on use: Have no data

2. HAZARDS IDENTIFICATION

Effects Of Overexposure: ***In general usage, this material is not hazardous. Dust or fume might be generated during further machining or else is hazardous.***

Eye/Nose/Throat/Skin Irr; Anemia/Nausea/Lung
 Edema/Emphysema

Primary Route(s) Of Entry: Eye/Skin/Ingest/Inhale

Pictogram:

(Dust or fume)



3. COMPOSITION / INFORMATION ON INGREDIENTS

Constituent	Element	CAS No.	Mass (%)
Copper	Cu	7440-50-8	Min 97
Iron	Fe	7439-89-6	2.1-2.6
Phosphorus	P	7723-14-0	0.015-0.150
Zinc	Zn	7440-66-6	0.050-0.200
Lead	Pb	7439-92-1	< 0.03
Plated Silver	Ag	7440-22-4	Per Drawing Requirement

4. FIRST AID MEASURES

Eyes Contact: Immediately flush out fume and dust particles with large amounts of water at least 15 minutes
 Skin Contact: If exposed to dust or fumes, wash skin with plenty of water
 Inhalation: Remove individual to fresh air
 Ingestion: If dust is ingested, immediately drink water to dilute. Never give anything by mouth to an unconscious person.
 Note to Physicians: There is no specific antidote
 Use symptomatic treatment

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5. FIRE FIGHTING MEASURES

Flammability Classification:	Not applicable
Flash Point:	Not applicable
Flammable Limits:	Upper óNot applicable %, Lower óNot applicable %
Fire Extinguishing Media:	Media applicable to surrounding area special
Fire-Fighting Procedures:	Not applicable (not flammable)
Unusual Fire And Explosion Hazards:	Fine metal particles can burn; high concentration of metallic fumes is a possible hazard, molten metal may explode on contact with water; for these fires fighting should use dry powder /sand.

6. ACCIDENTAL RELEASE MEASURES

Precautions and Equipment:	Not applicable since solid form.
Methods for Clean up:	Not applicable since solid form.
Personal Precaution:	Respiratory protection is not normally needed. If significant dusting occurs, wear a NIOSH/MSHA approved dust respirator.

7. HANDLING AND STORAGE

Special Precautions:	Good housekeeping practices to prevent accumulations of dust
Storage:	Store in original vacuum sealed packing Storage condition: Temperature ≤ 25 °C and relative humidity $\leq 65\%$
Handling:	Wear gloves when handling parts with loose surface particulate or sharp

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Threshold limit value (TLV) for constituent elements			OSHA (PEL)	
Constituent	Element	CAS No.	TWA (mg/m ³)	STEL (mg/m ³)
Copper	Cu	7440-50-8	0.10 (Fume) 1.00(Dust)	0.10 (Fume)
Iron	Fe	7439-89-6	10.00 (Oxide Fume)	-
Phosphorus	P	7723-14-0	0.1	0.3
Zinc	Zn	7440-66-6	5.0 (Fume)	10.0
Lead	Pb	7439-92-1	0.050 (Fume)	-
Plated Silver	Ag	7440-22-4	0.010 (Dust and Fume)	-

Eye Protection:	Safety glasses with sideshields or goggles when dust or fume is generated.
Skin Protection:	Protective gloves and face shields when dust or fume is generated.
Ingestion:	Wear face shields when dust or fume is generated.
Inhalation:	Wear face shields and face mask when dust or fume is generated.
Engineering Control:	General & local exhaust vent to keep dusts/fumes below TLV. Steel toed shoes with metatarsal guards, full protective clothing and cut resistant gloves.
Hygienic Practices:	Normal hygiene measures at the workplace are to be observed. Do not eat, drink, and smoke while working.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state and appearance:	Solid
Odor:	Not available
Taste:	Not available
Molecular Weight:	63.54 g/mole
Color:	Reddish Brown
pH (1% soln/water):	Not applicable
Boiling Point:	Cu:2582°C (Boiling point)
Melting Point/freezing point:	Approx. 1080-1090 °C for copper
Critical Temperature:	Not available
Specific Gravity:	8.94 (Water = 1)
Vapor Pressure:	Not applicable
Vapor Density:	Not available
Volatility:	Not available
Odor Threshold:	Not available
Water/Oil Dist. Coeff.:	Not available
Ionicity (in Water):	Not available
Dispersion Properties:	Not available
Solubility:	Insoluble in cold water
Stability:	The product is stable
Instability Temperature:	Not available
Conditions of Instability:	Not available
Incompatibility with various substances:	Not available
Corrosivity:	Non-corrosive in presence of glass
Special Remarks on Reactivity:	Not available.
Special Remarks on Corrosivity:	Not available
Polymerization:	No
Partition coefficient: n-octanol/water	Not available
Evaporation Rate	Not available
Flammability (solid, gas):	Not available

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable
Conditions To Avoid:	None
Material to Avoid:	None
Decomposition Products:	None

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:	No data for inhalation LC 50, dermal LD 50 and oral LD 50.
Local Effects:	Metal dust or fume may cause skin, eye, mucous membrane, and respiratory irritation. This material itself is not a skin or eye irritant. No organs known to be damaged from repeated exposure to this material. Lung damage may occur from inhalation of large amounts of dust or fume.
Sensitization:	Metal dust may cause eye and respiratory irritant sensitizer
Chronic Toxicity::	No effect reported for repeated exposure.

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12. ECOLOGICAL INFORMATION

Ecotoxicity :	Data none
Bioaccumulative potential :	Data none
Persistence and degradability :	Data none
Mobility in soil :	Data none
Other adverse effects :	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

13. DISPOSAL CONSIDERATIONS

Waste from Residues:	Material can be reclaimed for reuse and follow local regulation/law for the waste disposal.
Other precautions:	Adequate ventilation and/or respiratory protection

14. TRANSPORT INFORMATION

Shipping basic Description:	Not applicable. This material is not regulated as a hazardous material.
UN No.:	Not applicable
Notes:	Not applicable

15. REGULATORY INFORMATION

Data none

16. OTHER INFORMATION

The properties mentioned in this document are typical values. Please be noted that such properties for the actual product may be different from the data sheet.

This information provided in this Safety Data Sheet is correct to best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, storage, transportation, disposal and is not to be considered a warranty or quality specification.

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