



FULLRIVER MICRO-ELECTRONICS CO.,LTD

## Material Safety Data Sheet

Product name : Ag plated leadframe

Date prepared : Dec 4<sup>th</sup> 2006

### 1 Product Identification

Product name	Ag plated leadframe
Chemical family	Metal leadframe
Manufacturer	FULLRIVER MICRO-ELECTRONICS CO.,LTD Tai Shi Industrial Area, Dong Chong Town, Pan Yu Zone, Guang Zhou City, Guang Dong Province, China Phone:020-84918201 ext.228
Emergency assistance	FULLRIVER MICRO-ELECTRONICS CO.,LTD Tai Shi Industrial Area, Dong Chong Town, Pan Yu Zone, Guang Zhou City, Guang Dong Province, China Phone:020-84918220

### 2 Composition / Information of ingredients(% by weight)

Constituent (%)	A194		C19210		C7025	
	MIN	MAX	MIN	MAX	MIN	MAX
Cu	Balance		Balance		Balance	
Fe	2.1000	2.6000	0.0500	0.1500	0.009	
Co						
Si					0.2500	1.2000
Ni					2.2000	4.2000
Mn						
Zr						
Sn						
P	0.0150	0.1500	0.0250	0.0400		
Zn	0.0500	0.2000				
C						
Mg					0.0500	0.3000
Cr						
Pb	< 0.01					
Ag						



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### 3. Physical properties

Freezing point	Not applicable
Vapor pressure(mmHg)	Not applicable
Melting point / Boiling point	Not applicable
Solubility in water	Insoluble in water
Vapor density (Air=1)	Not applicable
Evaporation rate	Not applicable
Appearance	Solid
Odor	No odor

### 4. Fire, explosion, stability and reactivity information

Flash point	None
Flammable limits	None(LFL: not applicable, UFL: not applicable)
Extinguishing media	Leadframe is noncombustible. Use extinguishing media appropriate to the surrounding fire.
Chemical stability (condition to avoid)	Leadframe is a stable material.
Incompatibility (material to avoid)	Strong acid (hydrogen gas evolved contact)

### 5. Health hazard information

Inhalation	Not applicable
Ingestion	Not applicable
Skin	Skin contact with this material may cause, in some sensitive individuals, an allergic response if element such as copper and nickel are present.
Eye	Particular metal (dust) may be dangerous to the eye and surrounding tissue.
Toxicity	There is no information on the toxicity of this material. Under normal use the solid form of this material there are few health hazards.



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### 6. Emergency and first aid procedures

Inhalation	Breathing difficulty caused by inhalation of dust requires remove to fresh air. If breathing has stopped, perform article respiration an obtainment of medical assistance at once.
Ingestion	Swallowing metal power or dust can be treated by having the affected person swallow large quantities of water and attempting to induce vomiting if conscious. Obtain medical assistance at once.
Skin	Skin cuts and abrasions can be treated by standard first aid. Skin contamination with dust or powder can be removed by washing with soap and water. If irritation persists, obtain medical assistance at once.
Eye	Dust or powder should be flushed from the eyes with copious amounts of clean water. If irritation persists obtain medical assistance. Contact lenses should not be worn if working with metal dusts and powders.

### 7. Exposure control /Personal protection

Ventilation	Good general ventilation should be sufficient for most condition.
Respiratory protection	For most conditions, no respiratory protection should be needed; However, atmospheres, wear a NIOSH approved respirator to protect from dust.
Eye protection	Wear safety glasses when risk of eye injury is present, for example, metal powder handing.
Skin protection	Wear clean body covering clothing. Wear gloves to prevent metal cuts and skin abrasions.



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### 8. Handling and storage

Handling	Good housekeeping in order to prevent the accumulation of dust.
Storage	Storage in original vacuum sealed packing. Storage condition: 19 to 25 and relative humidity 60%.

### 9. Environmental protection information

Waste disposal method	Prior to disposal consider if material has recovery value. Dispose of material in compliance with governmental regulations.
Environment hazards	In solid form this material poses no special environmental problems.

### 10. Transportation information

Transportation hazardous material	Not a hazardous material for shipping.
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#### Additional Information

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