

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

Product Name : Lead-free solder
Product No. : HS-371 / HS-372 / HS-374
Manufacturer's Name : HOZAN TOOL INDUSTRIAL Co., Ltd.
Address : 1-2-12 Saiwaicho, Naniwa-ku, Osaka 556-0021, Japan
Emergency Telephone Number : Japan 06(6562)1134
Data Prepared : January 5, 2005
Preparer : MORI, Hiroaki

2. CHARACTERISTICS

Substance / Mixture : Mixture product

Chemical synonym name	Ingredients & Compositions	Chemical formula	CAS registered number
Tin	99.2-99.5 %	Sn	7440-31-5
Copper	0.5-0.8%	Cu	7440-50-8
Nickel	Less than 0.1%	Ni	7440-02-0

United Nations classification & UN number : NA

3. HAZARDS IDENTIFICATION

Item : No applicable to hazardous substances
Noxiousness : NA

4. HANDLING AND STORAGE

Handling

Before meal or after completion of operation, make sure to wash hands and gargle the throat.

Provide local exhaust at the work area of soldering.

Storage : Avoid the place directly exposed to the sun rays, store in a cool and dark place.

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5. EXPOSURE PROTECTION

Density allowance : 2.0 mg/m³ (value as tin content)
Facilities : Local ventilation, whole ventilation (at soldering operation)
Protective equipment
Inhalation : Safety face protective mask
Eyes : Goggle

6. PHYSICAL / CHEMICAL PROPERTIES

Outer appearance : Solid
Color : White metallic
Melting point : 227
Specific gravity : 7.4

7. HAZARD DATA

Inflammability : None
Combustibility (spontaneous combustibility, reacting to water) : None
Oxidizibility : None
Self reactivity • Explosion : None
Dust explosion : None
Stability • Reactivity : Stable

8. TOXICOLOGICAL INFORMATION

It is including symptoms and epidemic information about human being.

Corrosive properties : None
Irritant properties (skin, eyes) : None
Carcinogenic effects : No relevant information found.
Mutagenic effects : No relevant information found.
(microbe • chromosome aberration)
Effects on the reproductive system : No relevant information found.
Teratogenic effects : No relevant information found.
Others (including such case of producing poisonous gas when reacting to water)
: No relevant information found.

9. ECOLOGY INFORMATION

Biodegradability : No relevant information found.
Bioaccumulation : No relevant information found.
Fish toxicity : No relevant information found.

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10. PRECAUTIONS FOR DISPOSAL

Strictly observe the local regulations for disposal.

11. PRECAUTIONS FOR TRANSPORTATION

Take care handling.

Beware of fire.

Avoid such place with high temperature and high humidity and do not directly expose to the sun rays.

15. OTHER INFORMATION

Reference literatures

* '13398 Chemical products' issued by The Chemical Daily Co., Ltd.

* 'Solvent Pocket Handbook' edited by The Society of Synthetic Organic Chemistry Japan

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