



SHENMAO Technology Inc.

MATERIAL SAFETY DATA SHEET

1 · CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Chemical Product Name : FLUX, For Lead Free Solder Paste Use

Product Identifier: P25

Revised Date: 08 JULY2005

MANUFACTURER:

In Taiwan:

Shenmao Technology Inc.

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In Malaysia:

Shenmao Solder (M) Sdn. Bhd.

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In China:

Shenmao Solder Material (Suzhou) Co., Ltd..

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Sung Lin Town, Wu Chiang City, Suzhou Province, R.P.C.
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Dong Guan Shenmao Soldering Tin Co., Ltd.

The 2nd Ind. Area Jiumen Village Hu Men Town
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2 · COMPOSITION, INFORMATION OR INGREDIENT

Components-Chemical Name	wt.%	CAS No.
Rosin	3.2-5.7	8050-09-7
Wax	1.4-2.7	N.E.
Solvent	2.8-3.7	N.E.
Additive	1.2-1.5	N.E.
Tin (Sn)	81.5~87.5	7440-31-5
Silver (Ag)	2.5~3.6	7440-22-4
Copper (Cu)	0.42~0.62	7440-50-8
Nickel (Ni)	0.03~0.05	7440-02-0
Germanium (Ge)	0.005~0.008	7440-56-4
PS. Sn +Ag +Cu : 89%	Sn +Ag +Cu+Ni+Ge : 89%	N.E.= Not established

Alloy Composition Table

Alloy No.	Alloy Composition. %	RoHs Compliance	Alloy No.	Alloy Composition. %	RoHs Compliance
PF603	Sn /Ag 3.5	YES	PF609	Sn /Ag 3.8/Cu 0.7	YES
PF606	Sn /Ag 3.0/Cu 0.5	YES	PF610	Sn /Ag 3.0/Cu 0.5/ Ni 0.06/Ge 0.01	YES
PF607	Sn /Ag 3.5/Cu 0.7	YES			
PF608	Sn/Ag 3.9/Cu 0.6	YES	PF614	Sn /Ag 4.0/Cu 0.5	YES
PF636	Sn /Ag 3.0/Cu 0.5	YES	PF639	Sn /Ag 3.8/Cu 0.7	YES
PF637	Sn /Ag 3.5/Cu 0.7	YES	PF640	Sn /Ag 4.0/Cu 0.5	YES
PF638	Sn/Ag 3.9/Cu 0.6	YES			

3 - HAZARDS IDENTIFICATION

<p>EYE CONTACT: Contact with material at room temperature or fume from material at typical re-flow temperatures over 100 °C may cause eye irritation.</p>
<p>SKIN CONTACT: Can cause slight irritation.</p>
<p>INGESTION: Irritating to mouth, throat, and stomach. Can cause abdominal discomfort, nausea, vomiting and diarrhea.</p>
<p>INHALATION: Vapors or fumes from this material at typical re-flow temperatures over 100°C may cause local irritation to the respiratory system.</p>

4 - FIRST AID MEASURES

<p>EYE CONTACT : Gently rinse the affected eyes with clean water for at least 15 minutes. Arrange for transport to the nearest medical facility for examination and treatment by a physician as soon as possible.</p>
<p>SKIN CONTACT : Remove contaminated clothing. Wash affected area with soap and water. Wash clothing before reuse. If irritation persists, obtain medical attention.</p>
<p>INHALATION : Remove to fresh air. If not breathing, give artificial respiration or oxygen by trained personnel.</p>
<p>INGESTION : Give the person one or two glasses of water or solution of salt, try to get the victim to vomit. Arrange for transport to the nearest medical facility for examination and treatment by a physician as soon as possible.</p>

5 、 FIRE FIGHTING MEASURES

EXTINGUISH MEDIA :

Use alcohol resistant foam, carbon dioxide or dry chemical extinguishing agents.

FIRE-FIGHTING INSTRUCTIONS :

Shut off fuel to fire if possible to do so without hazard.

Evacuate area and fight fire from a safe distance.

Apply water from a safe distance to cool and protect surrounding area.

Firefighters should wear proper protective equipment.

FLASH POINT : Not applicable

EXPLOSION LIMIT : Not available

6 、 ACCIDENTAL RELEASE MEASURES

Shut out all sources of ignition; No flare, smoking or flames in area.

Wear proper protective equipment.

For spills, wipe and scrape away with cloth or paper, take up and store in a sealed container.

7 、 HANDLING AND STORAGE

HANDLING :

Do not use fire near storage area.

Wear proper protective equipment.

STORAGE :

Keep away from heat or sunlight.

Store in a cool (0-10°C) place in closed containers.

8 、 EXPOSURE CONTROLS AND PERSONAL PROTECTION

ENGINEERING MEASURES :

Use only with adequate ventilation and in closed systems.

Make available emergency shower and eye wash in the work area.

EXPOSURE GUIDELINES :

ACGIH TLV: 0.1mg/m³ (Silver)
2mg/m³ (Tin)

PROTECTIVE EQUIPMENT :

RESPIRATORY PROTECTION : Industrial canister gas masks.(Heating)

EYE PROTECTION : Safety goggles.

HAND, SKIN AND BODY PROTECTION : Rubber gloves.

Selection of specific items such as boots, apron or full-body suit will depend on operation.

9 、 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Gray colored paste
BOILING POINT	>200°C (Flux)
VAPOR PRESSURE	<0.01mmHg(20°C)
MELTING POINT	217~221°C (Solder)
SPECIFIC GRAVITY	7.4g/cm ³ (Solder, 20°C)
SOLUBILITY (IN WATER)	Almost Insoluble

10、STABILITY AND REACTIVITY

CHEMICAL STABILITY :

Stable, hazardous polymerization will not occur.

INCOMPATIBILITY WITH OTHER MATERIALS :

Strong oxidizing agents, strong bases and strong acids.

HAZARDOUS DECOMPOSITION PRODUCTS :

Carbon oxide on burning.

HAZARDOUS POLYMERIZATION :

Will not occur.

11、TOXICOLOGICAL INFORMATION

CORROSIVE AND IRRITANT PROPERTIES : Not available

ALLERGENIC AND SENSITIZING EFFECTS : Not available

ACUTE TOXICITY : Not available

SUB-ACUTE TOXICITY : Not available

CHRONIC TOXICITY : Not available

CARCINOGENIC EFFECTS : Not available

MUTAGENIC EFFECTS : Not available

EFFECTS ON THE REPRODUCTIVE SYSTEM : Not available

TERATOGENIC EFFECTS : Not available

12、ECOLOGICAL INFORMATION

BIODEGRADABILITY : Not available

BIOACCUMULATION : Not available

FISH TOXICITY : Not available

OTHER INFORMATION : Not available

13、DISPOSAL CONSIDERATIONS

Dispose in compliance with local regulations.

Do not discharge into the environment.

14、TRANSPORT INFORMATION

UN CLASS : Not applicable

UN NUMBER : Not applicable

Keep in a cool(0-10°C)place.

Follow all regulations in your country.

15、REGULATORY INFORMATION

APAN STATUS

EXISTING CHEMICAL SUBSTANCES(MITI) : Listed.

HCS Classification

Irritating substance.

Sensitizing substance. Target organ effects.
US STATUS TSCA INVENTORY : All ingredients listed.
State Regulation Rhode Island RTK hazardous substances: Tin Florida: Tin; Sliver; M-Pyrrol; Rosin Minnesota: Tin; Silver; M-Pyrrol; Rosin Michigan critical material: Silver Massachusetts RTK: Tin; Sliver; Copper; M-Pyrrol New Jersey spill list: Tin
California Proposition 65 Chemicals known to cause cancer: WARNING: This product may contain a chemical in trace amounts known to the State of California to cause cancer. Cadmium:7440-43-9 Nickel:7440-02-0 Cadmium:7440-43-9
INTERNATIONAL REGULATIONS EINECS: No available. DSCL (EEC): 36/38-Irritating to eyes and skin. 42/43-Msy cause sensitization by inhalation and skin contact. International Lists: Australia (NICNAS): All compounds Korea (TCCL): All compounds Philippines (RA6969): All compounds
LABELING ACCORDING TO EEC DIRECTIVES : HAZARD SYMBOL : T-Toxic RISK PHRASES : R 61-62-20/22-33 SAFETY ADVICES : S 53-45

Regulatory information with regard to this substance in your country or in your region should be examined by your own responsibility.

16 、 OTHER INFORMATION

REFERENCE: AIR PRODUCTS MSDS 、 INTERNATIONAL MARITIME DANGEROUS GOODS CODE			
HAZARDOUS	NFPA	HMIS	LEVEL : 0~4 : From least to serious
HEALTH	2	2	NFPA : National Fire protection Association rating identifies hazards during a fire emergency. HMIS : Hazardous Materials Identification System rating applies to process as packaged.
FLAMMABILITY	1	1	
REACTIVITY	0	0	
COUNTRY OF ORIGIN: TAIWAN, R.O.C			
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