

MATERIAL SAFETY DATA SHEET



Asahi Cored Solder Wire
Sn63/Pb37
Core Flux: CF-10A
MSDS #: EHC 2 - 3/5
Date of Preparation: February 2006

SECTION 1: CHEMICAL PRODUCT & COMPANY IDENTIFICATION

1.1 Product Details:

Product Name : Asahi Cored Flux Solder Wire
Trade Name : Asahi Cored Flux Solder Wire Sn63/Pb37 (Core Flux: CF-10A)
Use : Solder wire may be used for manual soldering or in repair and rework for electrical or electronic assemblies.

1.2 Company's Identification:

Manufacturer's Name and Address : Singapore Asahi Chemical & Solder Industries Pte Ltd
47 Pandan Road
Singapore 609288

Telephone : (65) 6262-1616
Facsimile : (65) 6261-6311

1.3 Contact Point:

Designation : Chemist
Emergency Telephone Number: (65) 6262-1616

SECTION 2: COMPOSITION/INFORMATION ON MATERIAL

| Chemical Name | CAS No. | % | OSHA PEL(mg/m ³) | ACGIH TLY (mg/m ³) | Other Limits Recommended |
|---------------------------|-----------|------------|------------------------------|--------------------------------|--------------------------|
| Alloy Composition: | | | | | |
| Tin (Sn) | 7440-31-5 | 63 | 2.0 | 2.0 | |
| Lead (Pb) | 7439-92-1 | 37 | 0.05 | 0.05 | |
| Flux | | | | | |
| Rosin | | 90 | | | |
| Organo-Halide Activator | | 4.5 | | | |
| Lactone Solvent | | 5.5 | | | |
| Total | | 100 | | | |

SECTION 3: HAZARD IDENTIFICATION

Effect of Acute (severe short term) Exposure: Ingestion of LEAD alloys is toxic and will induce poisoning.

- INHALATION : Inhalation of soldering fumes may cause irritation to the respiratory tract and may lead to central nervous system effects (drowsiness, dizziness, headaches, nausea, vomiting, headache, joint and muscle pain).
- SKIN CONTACT : NA
- EYE CONTACT : Soldering fumes may cause irritation to the eyes.
- INGESTION : Ingestion of lead will cause damage to health.

SECTION 4: FIRST AID MEASURES

- Ingestion : Seek medical attention.
- Eye Contact : Flush eyes with plenty of water immediately for at 15 minutes. Seek medical attention.
- Skin Contact : Wash thoroughly with soap and warm water.
- Inhalation : Evacuate to a safe area with fresh air.

SECTION 5: FIRE-FIGHTING MEASURES

- Extinguishing Media : NA
- Fire Fighting Instructions : NA
- Special Hazards : NA
- Unusual Fire and Explosion Hazards : Flux may burn if soldering is done with a flame.

SECTION 6: ACCIDENTAL RELEASE MEASURES

- Leak/Spill : Place into properly labeled waste container and may be sent for recovery following appropriate recovery routes or methods.

SECTION 7: HANDLING AND STORAGE

- Handling : Wash hand thoroughly with soap and water prior to eating, drinking or smoking. Do not smoke while soldering. Avoid inhalation of vapors and contact with skin and eyes. Observe good industrial practices.
- Storage : Store in a cool environment away from oxidizing agents.

SECTION 8: EXPOSURE CONTROL AND PERSONAL PROTECTION

- Engineering Measures : Maintain general or local exhaust ventilation to meet exposure limit requirements.
- Personal Protection : Operator should be protected from soldering fumes.
- PROTECTIVE GLOVES : Impervious rubber
- EYE PROTECTION : Safety glasses

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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|------------------------------------|-------------------------------|
| Appearance | : Metallic coil. |
| Odor | : Slight |
| Solubility in water: | : Slight (flux) |
| Boiling Point(°C) | : 600°C (metal); 124°C (flux) |
| Melting Point(°C) | : 183°C (solder) |
| Vapor Pressure(mm of Hg at 20°C) | : NA |
| Vapour Density (air=1) | : NA |
| Percentage Volatiles (by Volume) | : NA |
| Volatile Organic Compound (VOC) | : NA |
| Evaporation Rate (butyl acetate=1) | : NA |
| Specific Gravity (water=1 at 25°C) | : 8.42 (solder) |
| Flash Point (°C) | : 79°C (flux) |
| Auto-ignition Temperature(°C) | : NE |

SECTION 10: PHYSICAL HAZARDS (STABILITY AND REACTIVITY)

| | |
|--------------------------|---|
| Condition to avoid | : Moisture and direct contact with flame and excessive heating. |
| Incompatibles | : Unknown. |
| Decomposition products | : Unknown. |
| Hazardous polymerization | : May occur. |

SECTION 11: TOXICOLOGICAL INFORMATION

| | |
|---|--|
| Toxicity data | : Lead is toxic and will cause damage to health if ingestion. |
| Carcinogenicity | : Not listed. |
| Reproductive Effect | : Ingestion of lead will cause damage to the male reproductive system. |
| Effects of overexposure (Chronic Effect): | Breathing of vapors may produce respiratory irritation. |
| Target Organs | : Respiratory system and reproductive system. |
| Medical Conditions Generally Aggravated by Exposure | : Soldering fumes may irritate the eyes. |

SECTION 12: ECOLOGICAL INFORMATION

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|----------------------------|--|
| Mobility & Bioaccumulation | : Non volatile material. |
| Biodegradability | : Non biodegradable. |
| Aquatic Toxicity | : Lead is toxic and expected to be harmful to aquatic organisms. |

SECTION 13: DISPOSAL INFORMATION

Dispose according to federal, state and local regulations. This product is suitable for recovery following appropriate recovery routes or methods. If in doubt, contact Singapore Asahi.

SECTION 14: TRANSPORT INFORMATION

UN Number : NA
T.D.G. Classification : NA
Packing group : NA
Special shipping instruction : NA

SECTION 15: REGULATORY INFORMATION

- a. Proposed classification : Harmful
- b. Risk phrase
 - R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
 - R36/37/38 Irritating to the eyes, respiratory system and skin.
- c. Safety phrase
 - S23 Do not breath fume or vapor.
 - S24/25/26 Avoid contact with skin or eyes. In case of contact with skin, rinse immediately with plenty of water.
 - S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
 - S59 Refer to manufacturer/supplier for information on recovery/recycling.

SECTION 16: OTHER INFORMATION

THIS INFORMATION RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED AND MAY NOT BE VALID FOR SUCH MATERIAL USED IN COMBINATION WITH ANY OTHER MATERIALS OR IN ANY PROCESS. SUCH INFORMATION IS TO THE BEST OF THE COMPANY'S KNOWLEDGE AND BELIEVED ACCURATE AND RELIABLE AS OF THE DATE INDICATED.

HOWEVER, NO REPRESENTATION, WARRANTY OR GUARANTEE IS MADE AS TO ITS ACCURACY, RELIABILITY OR COMPLETENESS. IT IS THE USER'S RESPONSIBILITY TO SATISFY HIMSELF AS TO THE SUITABILITY AND COMPLETENESS OF SUCH INFORMATION FOR HIS OWN PARTICULAR USE.

*optional

NE = Not Established

NA = Not Applicable

PEL = Permissible Exposure Level