



Electroloy Metal Pte Ltd^{197700989H}

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MATERIAL SAFETY DATA SHEET

SECTION 1 : CHEMICAL PRODUCT & COMPANY IDENTIFICATION

1.1 Product Details:

Product Name : #233 LEAD FREE PASTE – Sn42/Bi58
Product Code : EMCO#233-302P
Product Use : Solder Paste for electrical or electronic application

1.2 Company's Identification:

Supplier's Name : **Electroloy Metal Pte Ltd.**
Address : Corporation Place,
2 Corporation Road #07-01B,
Singapore 618494
Telephone : +65 64912663
Facsimile : +65 63992168

SECTION 2 : HAZARD IDENTIFICATION

Primary Routes of Entry : Inhalation, Ingestion.
Carcinogenicity : Not Listed
Health Hazards : Breathing of fumes may produce respiratory irritation.
Signs and Symptoms : Inhalation or ingestion may produce nausea, vomiting, headache, joint and muscle pain. May cause dermatitis.
Eye Contact : Fumes may cause irritation of the eyes.
Skin Contact : Prolonged and repeated contact with skin may cause irritation.

SECTION 3 : COMPOSITION / INFORMATION ON MATERIAL

| Chemical Name | C.A.S Number | % by weight | OSHA PEL | ACGIH TLV |
|----------------------|---------------|-------------|----------|-----------|
| Tin | 7440 - 31 - 5 | 37-39 | 2 | 2 |
| Bismuth | 7440-69-9 | Balance | NE | NE |
| | | | | |
| Rosin | 8050-09-7 | 4-6 | 0.01 | 0.01 |
| Risk phrases R 42/43 | | | | |
| Compound Wax | - | 0.8-1.2 | NE | NE |
| Solvent | 112-59-4 | 3-4 | NE | NE |
| Additive | - | Trace | NE | NE |
| | | | | |
| Total | | 100 | | |

NOTES :-

C.A.S : Chemical Abstract Service

OSHA : Occupational Safety and Health Administration

PEL : Permissible Exposure Limit

ACGIH : American Conference of Government Industrial Hygienists

TLV : Threshold Limit Value

Powder is typically 89.5-90.5% of the solder paste composition.

SECTION 4 : FIRST AID MEASURES

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|--------------|---|
| Eye Contact | : Promptly flush with a large amount of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation persists, seek medical attention. |
| Skin Contact | : Promptly wash with soap and water and rinse thoroughly. Remove contaminated clothing/laundry before reuse. If irritation persists, consult a physician. |
| Inhalation | : Allow the victim to rest in a well ventilated area. Seek immediate medical attention. |
| Ingestion | : Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested. Loosen tight clothing, if the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention. |

SECTION 5 : FIRE-FIGHTING MEASURES

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|--|---|
| Flash point | : 141°C |
| Flammability Limits in Air % by volume | : NA |
| Lower Explosive Limit | : NA |
| Upper Explosive Limit | : NA |
| Auto-ignition Temperature | : NA |
| Extinguishing Media | : Carbon Dioxide, dry Chemical, foam. |
| Special Fire Fighting Procedures | : If large quantities of solder are on fire, use water spray. Do not use water jet. |
| Unusual Fire Explosion Hazards | : Flux in solder may burn if soldering is done with a flame. |

SECTION 6 : ACCIDENTAL RELEASE MEASURES

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| Leak/ Spill | : Absorb sweep up. Place into properly labeled waste container and sent for disposal according to Federal, State and local regulations. |
|-------------|---|

SECTION 7 : HANDLING AND STORAGE

| | |
|----------|--|
| Handling | : Wear suitable protective clothing. Use in a well ventilated area. When using do not eat, drink or smoke. Avoid contact with skin and eyes. After handling, always wash hands thoroughly with water and soap. |
| Storage | : Keep container dry. Keep in a cool, well ventilated place. Store at 10° C or lower. Combustible materials should be stored away from extreme heat and away from strong oxidizing agents. |

SECTION 8 : EXPOSURE CONTROL AND PERSONAL PROTECTION

| | |
|-------------------------------|--|
| Engineering Controls | : Use local exhaust to keep exposure level below exposure limit. |
| PERSONAL PROTECTIVE EQUIPMENT | |
| Respiratory Protection | : Maintain adequate exhaust. |
| Eye | : Wear approved safety glasses. |
| Skin | : Wear chemically impervious gloves. |
| Hygienic Work Practices | : Wash hands thoroughly prior to eating, drinking. Do not smoke while soldering. |

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

| | |
|-----------------------------------|---------------------------------|
| Physical State at 20°C | : Solid (Paste). |
| Boiling Point (760 mm Hg) | : 260°C |
| Vapor Pressure (mm Hg at 20°C) | : <0.01mmHg (20°C) |
| Vapor Density (air=1) | : NA |
| Solubility in water (% by weight) | : 0 |
| Appearance and Odor | : Grey cream, mild solvent odor |
| Specific Gravity(water=1 at 25°C) | : >4 |
| Melting Point | : 138 °C |
| Evaporation Rate(butyl acetate=1) | : NA |
| Water Reactive | : NA |

SECTION 10 : PHYSICAL HAZARDS (STABILITY AND REACTIVITY)

| | |
|----------------------------------|---|
| Stability | : Stable |
| Condition to Avoid | : Moisture |
| Hazardous Polymerization | : Will not occur. |
| Incompatibility | : Strong oxidizers. |
| Hazardous Decomposition Products | : Carbon Dioxide, Carbon Monoxide, Metal Oxide. |

SECTION 11 : TOXICOLOGICAL INFORMATION

Exposure Limits : See Section 3 for ingredients.

SECTION 12 : ECOLOGICAL INFORMATION

Keep out of waterway.

SECTION 13 : DISPOSAL INFORMATION

Disposal waste residues in accordance with all Federal, State and Local Regulations regarding pollution and waste disposal. Solder may send to metal reclaimer.

SECTION 14 : TRANSPORT INFORMATION

DOT Shipping Data : Not Regulated

Canadian TDG : Not Regulated

SECTION 15 : REGULATORY INFORMATION

All Chemical substances in this product are listed in the EPA (Environment Protection Agency) TSCA (Toxic Substances Control Act) inventory.

Risk phrases : R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
R33 Danger of cumulative effect.
R42/43 May cause sensitisation by inhalation and skin contact.

Safety phrases : S3/9/14 Keep in cool, well ventilated place away from oxidizing agent.
S23 Do not breathe fume or vapor.
S24/25/26/28 Avoid contact with skin or eyes. In case of contact with eyes, rinse immediately with plenty of water. After contact with skin, wash immediately with plenty of water.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S44 If you feel unwell, seek medical advice.
S46 If swallowed seek medical advice immediately.
S53 Avoid exposure - obtain special instructions before use.

SECTION 16 : OTHER INFORMATION

NFPA Rating :
Health : 1 Flammability : 1 Reactivity : 0

HMIS Rating :
Health : 1 Flammability : 1 Reactivity : 0

The information contained herein is based on data considered accurate and is offered solely for information, consideration and investigation. Electroly extends no warranties, makes no representation and assumes no responsibility as to the accuracy, completeness or suitability of this data for any purchaser's use. The data on this Material Safety Data Sheet relates only to this product and does not relate to use with any other material or in any process. All chemical products should be used only by or under the direction of technically qualified personnel who are aware of the hazards involved and the necessity for reasonable care in handling. Hazard communication regulations require that employees must be trained how to use a Material safety Data Sheet as a source of Hazard information.

NE = Not Established
NA = Not Applicable