



INDIUM CORPORATION OF AMERICA® EUROPE® ASIA-PACIFIC®
 INDIUM CORPORATION (SUZHOU)®
SAFETY DATA SHEET

This safety data sheet represents a family grouping of all metal mixes that are blended with the same flux known as Indium6.2. A table is provided that lists all metal groupings. To better serve all of our customers Indium Corporation has generated one SDS, for this product, to be used within the United States as well as internationally. Some of the regulatory information contained within may not be applicable to the customer's individual state or country. Unless otherwise stated the health and safety information provided within is applicable to all products.

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: INDALLOY WITH INDIUM6.2

SDS Number: SDS- WS4013

Revised Date: 9 NOVEMBER 2015

Product Use: INDUSTRIAL USE - SOLDER PASTE- WATER SOLUBLE

MANUFACTURER:

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2. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY:

*Eye *Inhalation *Skin *Ingestion NTP

Carcinogen listed in

IARC OSHA *Not Listed

*See Section 11

GHS:



Signal Word: Warning

Hazard statement(s)

H303 May be harmful if swallowed (lead)
 H319 Causes serious eye irritation
 H335 May cause respiratory irritation
 H351 Suspected of causing cancer (lead)
 H361 Suspected of damaging fertility or the unborn child (lead)
 H373 May cause damage to organs through prolonged or repeated exposure (lead)
 H410 Very toxic to aquatic life with long lasting effects (lead)

Precautionary statement(s)

P233 Keep container tightly closed
 P261 Avoid breathing dust/fume/gas/mist/vapors/spray
 P270 Do not eat, drink or smoke when using this product
 P273 Avoid release to the environment
 P280 Wear protective gloves/protective clothing/eye protection/face protection
 P362 Take off contaminated clothing and wash before reuse
 P301 + P314 IF SWALLOWED: Get Medical advice/attention if you feel unwell
 P302 +P352 IF ON SKIN: Wash with plenty of soap and water
 P304 + 341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
 P305 + 351 IF IN EYES: Rinse continuously with water for several minutes (15 mins)

POTENTIAL HEALTH EFFECTS:

Eye Contact: Contact with material at room temperature or fume from material at typical re-flow temperatures over 100°C may cause serious eye irritation.

Ingestion: This product contains other metal alloy powders and organic chemicals.
 May be harmful if swallowed.

Inhalation: Vapors or fumes from this material at typical re-flow temperatures over 100°C may cause local irritation to the respiratory system. May be harmful if inhaled.

Skin Contact: May cause skin irritation.

Chronic: **SILVER:** Chronic skin contact or ingestion of silver powder, salts or fume can result in a condition known as Argyria, a condition with bluish pigmentation of the skin and eyes.

LEAD: Prolonged exposure to vapors or fumes at higher temperatures may cause respiratory irritation and systematic lead poisoning. Symptoms of lead poisoning include headache, nausea, abdominal pain, muscle and joint pain and damage to the nervous system, blood system and kidneys.

TIN: Has been shown to increase incidence of sarcoma in animal tests.

NOTE: The Indium Corporation does not recommend, manufacture, market or endorse any of its products for human consumption.

Warning: This product may contain lead. Lead may be harmful to your health. Federal law prohibits the use of leaded solders in making joints or fittings in any private or public water supply system. Keep out of the reach of children.

3. COMPOSITION / INFORMATION ON INGREDIENTS

| Components | % wt | CAS Registry #/ EINECS# | PEL mg/m ³ | TLV-TWA mg/m ³ | TLV-STEL mg/m ³ |
|-------------------------|---------|----------------------------|--------------------------|------------------------------|-------------------------------|
| TIN | * | 7440-31-5/231-141-8 (US) | 2 | 2 | - |
| | | (EU) | - | 2 | 4 |
| | | (Singapore) | 2 | - | - |
| | | (Canada) | N.E. | 2 | 4 |
| SILVER | * | 7440-22-4/231-131-3 (US) | 0.01 | 0.1 | - |
| | | (EU) | - | 0.1 | - |
| | | (Canada) | - | 0.1 | 0.3 |
| | | (Mexico) | - | 0.1 | N.E. |
| | | (Singapore) | 0.1 | - | - |
| LEAD | * | 7439-92-1/231-100-4 (US) | 0.05 | 0.05 | - |
| | | (EU) | - | 0.15 | - |
| | | (Canada) | - | 0.05 | - |
| | | (Singapore) | 0.15 | - | - |
| | | (Mexico) | - | 0.15 | - |
| | | (China) | - | 0.05(dust) 0.03(fume) | - |
| ROSIN | 0.3-2 | 65997-05-9 | N.E. | N.E. | N.E. |
| | | (EU) | 0.05 | - | 0.15 |
| POLYGLYCOL ETHER | 1-2 | 9038-95-3 | N.E. | N.E. | N.E. |
| PROPRIETARY | 1.8-4.0 | (US) | - | 5 | - |
| | | (Singapore) | 5 | - | - |

| | | | | |
|-----------------------------------|-------|--|------|-------------------|
| PROPRIETARY ACTIVATORS | 4.9-7 | N.E. | N.E. | N.E. |
| N.E. = Not established | | EU = European Union Occupational Exposure Limits | | * See alloy table |

ALLOY TABLE

Metal alloy mixed with flux

| INDALLOY (Metal Mixture) | RoHS 2 Compliance | %TIN Sn | %LEAD Pb | %SILVER Ag |
|-----------------------------|--|------------|-------------|---------------|
| 100 (62.6Sn/37Pb/0.4Ag) | NO (lead) *Note otherwise does complies | 52-57.6 | 30.7-34 | 0.33-0.37 |
| 104 (62Sn/36Pb/2Ag) | NO (lead) *Note otherwise does complies | 51.9-57.5 | 29.9-33.2 | 1.2-1.8 |
| 106 (63Sn/37Pb) | NO (lead) *Note otherwise complies | 52.3-58 | 30.7-34 | - |

RoHS 2 Restriction of Hazardous Substances EU Directive 2011/65/EU. Review any applicable exemptions that may apply.

4. FIRST AID MEASURES

- Eye Contact:** Hold eyelids apart and flush eyes with plenty of tepid water for at least 15 minutes. Seek medical attention if irritation persists.
- Ingestion:** If patient is conscious, ONLY induce vomiting as directed by trained personnel. NEVER give anything by mouth to an unconscious person. Seek medical attention immediately.
- Inhalation:** Remove to fresh air. If not breathing, give artificial respiration or oxygen by trained personnel. Seek immediate medical attention.
- Skin Contact:** Remove contaminated clothing. Wash affected area with soap and water. Wash clothing before reuse. If irritation persists, obtain medical attention.

5. FIRE FIGHTING MEASURES

- Flash Point:** Not applicable **Method:** Not applicable
- Auto-ignition Temperature:** Not established.
- Flammable Limits:** Limits not established
- Extinguishing Media:** Use extinguishers appropriate for the surrounding fire conditions. Foam, dry chemical, water spray.
- Special Fire Fighting Procedures:** Firefighters must wear NIOSH approved self-contained breathing apparatus and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Wear a respirator and appropriate Personal Protective (See Exposure Controls/Personal Protective Section). Use spatula, scoop up paste and place in glass or plastic container. Remove traces of paste residue using cloth rags or paper towels moistened with isopropyl alcohol. Dispose of following all Federal, State and Local regulations. In the EU refer to the Special Waste Regulations.

7. HANDLING AND STORAGE

Handling Precautions: Keep containers tightly closed when not in use. Use care to avoid spills. Avoid breathing vapors from heated material. Avoid contact with eyes, skin and clothing. Use with adequate ventilation.

Storage Precautions: Store product in tightly capped original containers in a cool, dry area. Keep away from heat and flame. Store away from incompatible materials. Empty containers may be hazardous as they contain product residue.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Local exhaust ventilation is necessary to control airborne levels. Use only with production equipment with adequate ventilation and other safety features. Avoid exposure to lead containing fume.

Personal protection:

Eyes: Chemical safety glasses/goggles. Face shield for any splash hazards.

Respirator: An authority approved or compliant marked air-purifying respirator with a fume/organic chemical cartridge is recommended under certain circumstances where airborne concentrations are expected to be elevated.

Skin: Compatible chemical resistant gloves such, as nitrile should be worn. Protective outer garment, apron and sleeves as appropriate.

Other: Eyewash fountain in work area. Avoid the use of contact lenses in high fume areas.

Work/Hygienic Practices: Maintain good housekeeping. Clean up spills immediately.

Avoid eating, smoking or drinking in the work area. Wash hands thoroughly with soap and water immediately upon leaving the work area. Follow standard lead work practices, if applicable.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|--------------------------|---------------------------|-----------------------------|-----------------|
| Appearance: | Grey paste | Boiling Point: | Not established |
| Odor: | Mild characteristic odor. | Melting Point: | Not applicable |
| Specific Gravity: | Not established | pH: | Not applicable |
| Vapor Pressure: | Not applicable. | Solubility in Water: | Water Soluble |
| Vapor Density: | (air=1) Not applicable. | | |

10. STABILITY AND REACTIVITY

General: Stable.

Conditions to Avoid: High temperatures, open flame.

Incompatible Materials: Not established

Hazardous Decomposition / Combustion: Harmful organic fumes and toxic oxide fumes may form at elevated temperatures.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity: NTP: No
OSHA: No
IARC: Yes - lead and lead compounds

LD50: Not established. **LC50:** Not established.

Other: Prolonged or repeated exposure to rosin flux may cause workers to develop occupational asthma. Lead can cause potential harm to the developing fetus. Lead a suspected carcinogen.

12. ECOLOGICAL INFORMATION

Product not tested. Contains lead which is very toxic to the aquatic environment.

13. DISPOSAL CONSIDERATION

Waste Disposal Method: Dispose of in accordance with all Federal, State and Local environmental regulations. In Europe follow the Special Waste Regulations.

14. TRANSPORT INFORMATION

Transport in accordance with applicable regulations and requirements.

Not classified as hazardous in shipping under regulations. (USDOT/IATA/IMDG)

North American Emergency Guide Book – Not classified

UN-NONE

15. REGULATORY INFORMATION

The information in this Safety Data Sheet meets the requirements of the United States Occupational Safety and Health Act and regulations promulgated hereunder (29 CFR 1910.1200 ET. SEQ.).

This product has been classified in accordance with the Mexican regulations: NOM – 018-STPS-2000 and NOM-010-STPS-1999.

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation (CPR).



Canadian WHMIS: D2A-Materials Causing Other Toxic – Very Toxic Material (Chronic).
Causing Other Toxic Effects -irritant

D2B Materials

This product has been classified in accordance with the guidelines set by the Dept of Industrial Health of the Republic of Singapore.

This product has been classified using the Chinese Occupational Exposure Limit for Hazardous Agents in the Workplace, GBZ2-2002.

SARA 313 Listing - 40 CFR 372.65 lead, silver

All ingredients are listed on the EPA TSCA Inventory.

EPA Genetic Toxicology Program – lead.

16. OTHER INFORMATION

| | | |
|----------------------------|--------------------|---|
| HMIS Hazard Rating: | Health: | 2 |
| | Fire: | 1 |
| | Reactivity: | 0 |

Revised Date: 9 NOVEMBER 2015

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