



THE INDIUM CORPORATION OF AMERICA®\EUROPE®\ASIA-PACIFIC®  
INDIUM CORPORATION (SUZHOU)®

## SAFETY DATA SHEET

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

**1.1 Product Identifier:** INDALLOY CONTAINING INDIUM WITH TIN, LEAD, SILVER, COPPER

**SDS Number:** SDS-IN 009

**Revised Date:** 3 FEBRUARY 2015

#### **1.2 Relevant identified uses of the substance or mixture and uses advised against**

**Product Use:** Industrial Use (Mixture) – METAL ALLOY CONSISTING OF INDIUM MIXED WITH ONLY TIN AND/OR, LEAD AND/OR SILVER AND/OR COPPER. CAN BE IN SOLID METAL OR POWDER FORM.

SEE TABLE FOR VARIOUS METAL MIX PERCENTAGES.

#### **1.3 Details of the supplier of the safety data sheet**

#### **MANUFACTURER/SUPPLIER/IMPORTER:**

##### **In America:**

The Indium Corporation of America  
1676 Lincoln Ave., Utica NY 13502  
Technical & Safety Information: (315) 853-4900  
Safety & SDS Information: [nswarts@indium.com](mailto:nswarts@indium.com)  
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##### **In Europe:**

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##### **In China:**

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Jiangsu Province, China 215126  
Information: (86) 512-6283-4900

**In Asia:**

Indium Corporation of America  
 Asia-Pacific Operations-Singapore  
 29 Kian Teck Avenue  
 Singapore 628908  
 Information: +65 6268-8678

**1.4 Emergency telephone number**

**FOR CHEMICAL EMERGENCY ONLY PHONE \*:**

**CHEMTREC 24 hrs.**

**USA: 1 (800) 424-9300**

**Outside USA: +1 (703) 527-3887**

**\* Used only for spill/leak/fire/exposure/accident**

**ALL OTHER INQUIRIES: TOLL FREE: +1-800-448-9240 Indium Corporation**

**SECTION 2. HAZARDS IDENTIFICATION**

**PRIMARY ROUTES OF ENTRY:**

Eye    Inhalation    Skin    Ingestion    NTP    IARC    OSHA    Not Listed

**Carcinogen listed in**

**2.1 Classification:**

Xn                      General Risk Phrases: R20/22, R36/37/38, R33, R40, R48, R61, R50/53  
 See Section 16 for full text of each relevant hazard statement.

**2.2 Label Elements**

General GHS:



lead containing products

Signal Word: Warning

Hazard statement(s)

- H303                      May be harmful if swallowed
- H315                      Causes skin irritation
- H319                      Causes serious eye irritation
- H332                      Harmful if inhaled
- H335                      May cause respiratory irritation
- H351                      Suspected of causing cancer (lead)
- H361                      Suspected of damaging fertility or the unborn child (applicable to lead containing product)
- H373                      May cause damage to organs through prolonged or repeated exposure (applicable to lead containing product)
- H410                      Very toxic to aquatic life with long lasting harmful effects (lead)
- EUH201A                Warning! Contains lead (applicable only to the products listed that contain lead) Review listing.

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 + P341	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
P305 + P351	IF IN EYES: Rinse continuously with water for several minutes (15 mins)

### **2.3 OTHER HAZARDS:**

#### **POTENTIAL HEALTH EFFECTS:**

**Eye Contact:** Contact with powdered metal alloy or fume from molten metal may cause irritation. Severe eye damage may result from hot molten metal being splashed into the eyes. Wear safety glasses and face shield when working with molten metal.

**Ingestion:** Ingestion of dust may cause headache, nausea, abdominal pain, fatigue and pain in the legs, arms and joints. May be harmful.

**Inhalation:** Inhalation of fume or dust may cause local irritation to the respiratory system. Inhalation of fume or dust may be harmful. Inhalation of indium may cause additional respiratory issues.

**Skin Contact:** Normal handling of solid metal should not cause any adverse health effects. Hot molten metal may cause burns to the skin. Wear protective equipment when handling molten metal. Protect skin when grinding/cutting, may cause irritation.

#### **Chronic:**

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

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. Signs and symptoms of exposure – anemia.

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

INDIUM: May cause damage to respiratory or kidney system. May be harmful if inhaled.

COPPER: Overexposure to fumes may cause metal fume fever (chills, muscle aches, nausea, fever, dry throat, cough weakness, lassitude); metallic or sweet taste; discoloration of skin and hair. Tissue damage of mucous membranes may follow chronic dust exposure

## SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

### 3.2 Mixture:

Components	% wt	CAS Registry #/ EINECS#	
TIN	*	7440-31-5/231-141-8	[R36/37] [S26/S37/39]
LEAD	*	7439-92-1/231-100-4	[R20/22, R33, R40, R52/53, R61] [S23, S36/37/39, S61, S62]
SILVER	*	7440-22-4/231-131-3	[S24/25]
INDIUM	*	7440-74-6/231-180-0	[R20/21/22]
COPPER	*	7440-50-8/231-159-6	[R36/37/38] [S26, S37/39]

**THIS PRODUCT DOES NOT CONTAIN ANY EU REPORTABLE SUBSTANCES OF VERY HIGH CONCERN (SVHC).**

\* See Alloy Table at end of document for breakdown of percentages of alloy mixtures products

<http://www.indium.com>

## SECTION 4. FIRST AID MEASURES

### 4.1 Description of 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.

### 4.2 Most important symptoms and effect, both acute and delayed:

Exposure to metal fumes may cause irritation to the respiratory system. Long term exposure by inhalation to metal fumes may cause illness such as metal fume fever.  
Exposure to lead fume may cause harm. Sign of overexposure is anemia.

### 4.3 Indication of any immediate medical attention and special treatment needed:

No specific special treatment information is available on this mixture. Review data provided in this document to understand the hazards when working with the product. No other information is available at this time.

## SECTION 5. FIRE FIGHTING MEASURES

- 5.1 Extinguishing Media:** Use extinguishers appropriate for the surrounding fire conditions. Water, CO2, foam media.
- 5.2 Special hazards arising from the substance or mixture:**  
May produce toxic fumes of carbon monoxide if burning or metal oxide fumes.
- 5.3 Advice for Firefighters** Fire fighters must wear approved self-contained breathing apparatus and full protective clothing.

Material product is not flammable. Metal dust in air could pose a flammable issue. No other information is available.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures:

#### **For non-emergency personnel:**

Keep away from the spill. Remove sources of ignition. Keep exhaust ventilation system running. In the event of a fire evacuate area.

#### **For emergency responders:**

Wear safety glasses, gloves when cleaning up any spill. Other equipment may be necessary based on the immediate area and other chemicals unrelated to the product that may be in use. Adequate ventilation should be available. Keep unnecessary personnel away from area during clean up. Solid metal can easily be cleaned up. Do not sweep. Vacuum solids and avoid creating dust in air.

**6.2 Environmental Precautions:** Metals are not generally suited for release to any body of water including drains. Avoid release to environment.

### 6.3 Methods and material for containment and cleaning up:

Spill or leak procedures: Solid metal can be picked up and placed into metal container. If hot allow to cool then place into metal container. Recycle metal.

**6.4 Reference to other sections:** See Section 8 for exposure levels.

## SECTION 7. HANDLING AND STORAGE

- 7.1 Precautions** Keep containers tightly closed when not in use. Use care to avoid spills. Wear appropriate personal protective equipment when working or handling product. Always thoroughly wash your hands after handling this product. DO NOT touch or rub eyes until hands are washed. Do not eat, drink or smoke when handling this product. Utilize exhaust ventilation when heating product. Emissions contain metal fumes.

### 7.2 Conditions for Safe Storage, including any incompatibilities:

**Storage Precautions:** Store product in tightly capped original containers in a cool, dry area. Refer to product label and product data sheet for specific storage temperature requirements.  
Rotate stock to ensure use before expiration date.

**7.3 Specific End Use(s):** Soldering applications and other applications.

**SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**8.1 Control Parameters:**

			<u>TWA</u>	<u>STEL</u>
		<u>CAS#/EINECS#</u>	mg/m3	mg/m3
<b>TIN</b>	*	7440-31-5/231-141-8		
		(UK)	2	4
		(Belgium)	2	-
		(Germany)	2	-
		(Netherlands)	2	-
		(Spain)	2	-
		(Poland)	2	-
<b>LEAD</b>	*	7439-92-1/231-100-4		
		(UK)	0.15	-
		(France)	0.1	-
		(Spain)	0.15	-
		(Italy)	0.15	-
		(Portugal)	0.05	-
		(Finland)	0.1	-
		(Denmark)	0.05	-
		(Austria)	0.1	0.4
		(Switzerland)	0.1	0.8
		(Poland)	0.05	-
		(Norway)	0.05	-
		(Ireland)	0.15	-
		(Poland)	0.05	-
<b>SILVER</b>	*	7440-22-4/231-131-3		
		(UK)	0.1	0.3
		(Belgium)	0.1	-
		(France)	0.1	-
		(Germany)	0.1	-

		(Netherlands)	0.1	-
		(Spain)	0.1	-
		(Poland)	0.05	-
<b>COPPER</b>	*	7440-50-8 /231-159-6		
		(UK)	0.2 (fume)	0.6(fume)
		(France)	2	0.2(fume)
		(Belgium)	1	-
			0.2(fume)	
		(Spain)	1	-
			0.2(fume)	
		(Portugal)	1	0.2(fume)
		(Netherlands)	0.1	-
		(Finland)	1	-
			0.1	
		(Denmark)	1	-
			0.1	
		(Austria)	1	4
			0.1(fume)	0.4
		(Switzerland)	0.1	0.2
		(Norway)	1	0.1
		(Ireland)	1	2
			0.2 (fume)	
		(Poland)	0.2	-
<b>INDIUM</b>	*	7440-74-6/231-180-0		
		(UK)	0.1	0.3
		(Belgium)	0.1	-
		(Spain)	0.1	-
		(Portugal)	0.1	-
		(Finland)	0.1	-
		(Denmark)	0.1	-
		(Austria)	0.1	0.2
		(Switzerland)	0.1	-
		(Norway)	0.1	-
		(Ireland)	0.1	0.3

N.E. = Not established

TWA = time weighted average

STEL = short term exposure limit

## 8.2 Exposure Controls:

**Engineering Controls:** Use with proper equipment with adequate exhaust ventilation and other safety features specifically designed for use with solder applications or other industrial uses. Control concentration of all components with established exposure limits so they are not exceeded. Use exhaust ventilation when heating product. Air emission control equipment may be necessary based on the local governmental requirements for contaminants entering the atmosphere. Emissions contain metal fumes.

### Personal protection:

**Eyes:** Chemical safety glasses/goggles. Face shield for molten metal.

**Respiratory:** An approved or EU compliant CE marked air-purifying respirator with a fume/organic chemical cartridge is recommended under certain circumstances (i.e. when re-flowing manually on a plate instead of a ventilated re-flow furnace) where airborne concentrations are expected to be elevated or exceed exposure limits.

**Skin:** Compatible chemical resistant gloves. Recommend a nitrile disposable or other chemical glove. Hot gloves for handling molten metal.

**Other:** Lab coat, eye-wash fountain in work area. Avoid the use of contact lenses in high fume areas.

**Work/Hygienic** Maintain good housekeeping. Clean up spills immediately. Good personal hygiene is essential. 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 as established under governmental guidelines when applicable.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties:

<b>Appearance:</b>	Solid metal or powder	<b>Boiling Point/Range:</b>	Not determined
<b>Odor:</b>	None.	<b>Melting Point/Freezing Point:</b>	Not applicable
<b>Odor Threshold:</b>	Not established	<b>Evaporation Rate:</b>	Not applicable
<b>Specific Gravity:</b>	See alloy table	<b>pH:</b>	Not applicable
<b>Vapour Pressure:</b>	Not applicable.	<b>Solubility in Water:</b>	Insoluble
<b>Vapour Density:</b>	(air=1) Not applicable.	<b>Partition coefficient:</b>	Not established
<b>Relative Density:</b>	Not established	<b>Flammability:</b>	Not applicable
<b>Flash Point:</b>	Not applicable	<b>Method:</b>	Not applicable
<b>Auto-ignition Temperature:</b>	Not applicable	<b>Flammable Limits:</b>	Limits not established
<b>UEL/LEL Limits:</b>	Not applicable	<b>Decomposition Temp:</b>	Not applicable
<b>Viscosity:</b>	Not established	<b>Explosive properties:</b>	Not applicable
<b>Oxidizing Properties:</b>	Not established		

**9.2 Other Information:** Above data for the whole mixture.



**SECTION 10. STABILITY AND REACTIVITY**

- 10.1 Reactivity:** Stable.
- 10.2 Chemical Stability:** Stable
- 10.3 Possibility of Hazardous Reactions:** Not established
- 10.4 Conditions To Avoid:** None known
- 10.5 Incompatible Materials:** Avoid contact with acids, bases or oxidizing agents.
- 10.6 Hazardous Decomposition / Combustion:** Harmful organic fumes and toxic oxide fumes may form at elevated temperatures. Metal oxide fumes.
- 10.7 Hazardous Polymerization:** Will not occur.

**SECTION 11. TOXICOLOGICAL INFORMATION****11.1 Information on toxicological effects:**

<b>Acute toxicity:</b>	Not established	<b>Mutagenicity:</b>	Not established
<b>Irritation:</b>	Not established	<b>Toxicity for Reproduction:</b>	Not Established
<b>Corrosivity:</b>	Not applicable	<b>Absence of specific data:</b>	None available (not tested)
<b>Sensitization:</b>	Not available		
<b>Repeated dose toxicity:</b>	Not established		
<b>Carcinogenicity:</b>	Not established		
<b>Likely Routes of Entry:</b>	eyes (irritation) /skin (irritation ) /inhalation (irritation/harmful) ingestion (may be harmful)		
<b>Interactive effects:</b>	None known		

**Symptoms related to the physical, chemical and toxicological characteristics:**

May cause irritation or harm by inhalation.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure:**

Exposure to lead fume, if applicable, may cause harm by inhalation and ingestion. Chronic exposures to lead fume, if applicable, can cause potential harm to the developing fetus. Lead exposure can be toxic.

**Mixture verses substance information:** None known

**Other Information:**

**Carcinogenicity:** **NTP:** No (National Toxicity Program)

**Listing** **OSHA:** No (US Occupational Safety & Health Administration)

**IARC:** Yes - Lead and lead compounds are listed as possible carcinogens. (International Agency for Research on Cancer)

Lead – Suspected human reproductive toxicant. May cause damage to organs through prolonged or repeated exposure. Reproductive toxicity – rat –inhalation, oral/ effects on newborn.

RTECS# OF7525000 (lead), NL1050000 (indium), VM3500000 (silver), XP7320000 (tin), XP7320000 (tin), GL7900000 (fume/copper)

RTECS – Registry of Toxic Effects of Chemical Substances

**SECTION 12. ECOLOGICAL INFORMATION**

Product mixtures not tested.

**12.1 Toxicity:** No information available

**12.2 Persistence and degradability:** No information available

**12.3 Bioaccumulative potential:** No information available

**12.4 Mobility in soil:** No information available

**12.5 Results of PBT and vPvB assessments:** No data is available

**12.6 Other adverse effects:** No information is available for mixture. Avoid release to environment.

Lead – Toxicity to fish – mortality LOEC – rainbow trout – 1.19 mg/l – 96h. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Bioaccumulation – Oncorhynchus kisutch – 2 weeks  
Bioconcentration factor (BCF): 12

## SECTION 13. DISPOSAL CONSIDERATION

**13.1 Waste treatment method:** Scrap metal alloy usually has value. Contact a commercial reclaimer for recycling. Otherwise, dispose of in accordance with environmental regulations. Containerize material and classify according to applicable regulations. No pre-treatment on site is recommended. Do not dispose of down any drain or waterway. Utilize the same personal protective equipment as the user when handling for disposal.

**RoHS (Restriction of Hazardous Substances):** Product mixtures do not contain any PBB or PBDT brominated compounds.

Note that product mixtures do contain lead and are therefore not complaint with RoHS. Users should review their particular use for any applicable exemptions that may apply. Review alloy table for products.

## SECTION 14. TRANSPORT INFORMATION

Transport in accordance with applicable regulations and requirements.

Solid metal form:

Not regulated/non - hazardous under US DOT (United States Department of Transportation).

Not regulated/non - hazardous under international shipping requirements.

**14.1 UN Number:** None

**14.2 UN proper shipping name:** None

**14.3 Transport hazard class(s):** None

**14.4 Packing group:** None

**14.5 Environmental hazards:** None

**14.6 Special precautions for user:** None

**14.7 Transport in bulk:** Not applicable

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Note: Lead Powder form: only if it meets or exceeds the reportable quantity (RQ) in a single package

Lead- RQ = 10 lbs

RQ is defined as reportable quality

RQ UN 3077, Environmentally Hazardous Substance , Solid, N.O.S., 9, PG III (lead)



Otherwise this does not meet the definition of a hazardous substance as defined under US DOT Regulation 49 CFR 171.8 as well as international shipping regulations.

All other metal powder mixtures are not hazardous for shipping. UN: NONE

MARINE POLLUTANT: NO

## SECTION 15. REGULATORY INFORMATION

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

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.).

All ingredients are listed on the USEPA TSCA Inventory.

All ingredients are listed on EINECS.

Safety data sheet was developed using EC 1907/2006 amended as of 20 May 2010 EU No 453/2010 and information as stated under regulation EC No 1272/2008 CLP Regulation.

GHS = Global Harmonized System

CLP= Classification, labeling and packaging

Product does not contain any substances ozone depleting substances and therefore not subject to EC 2037/2000.

**15.2 Chemical safety assessment:** None performed for mixture.

## SECTION 16. OTHER INFORMATION

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

### Risk Phrases:

- R36/37/38 Irritating to eyes, respiratory system and skin
- R20/22 Harmful by inhalation and if swallowed
- R33 Danger of cumulative effects (lead)
- R40 Limited evidence of carcinogenic effect (lead)
- R48 Danger of serious damage to health by prolonged exposure (lead)
- R61 May cause harm to the unborn child (lead)
- R50/53 Very toxic to aquatic organisms and may cause long-term effects in the aquatic environment (lead)

### Safety Phrases:

- S20/21 When using do not eat, drink or smoke
- S23 Do not breathe fumes

S24/25	Avoid contact with skin and eyes
S27	Take off immediately all contaminated clothing
S28	After contact with skin wash immediately with plenty of soap and water
S36/37/39	Wear suitable protective clothing, gloves and eye/face protection
S7	Keep container tightly closed

**Revised Date:** 3 FEBRUARY 2015  
**Prepared by:** Nancy Swarts, The Indium Corporation of America, nswarts@indium.com  
**Approved by:** Nancy Swarts, The Indium Corporation of America

Changes provided on this SDS were based on the requirements of EU No. 453/2010 of May 20, 2010 regarding amendments to EC No. 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).

The information and recommendations contained herein are, to the best of The Indium Corporation of America's knowledge and belief, accurate and reliable as of the date issued. The Indium Corporation of America does not warrant or guarantee their accuracy or reliability, and The Indium Corporation of America shall not be liable for any loss or damage arising out of the user thereof. The information and recommendations are offered for the user's consideration and examination, and it is the user's responsibility to satisfy itself that they are suitable and complete for its particular use. If buyer repackages this product, legal counsel should be consulted to insure proper health, safety and other necessary information is included on the container.

## ALLOY TABLE

INDALLOY METAL MIX	%INDIUM (In)	%TIN (Sn)	%LEAD (Pb)	%SILVER (Ag)	%COPPER (Cu)	RoHS 2*** Compliance	LIQUIDUS °C/°F	DENSITY (gm/cm <sup>3</sup> )
1	50	50	-	-	-	Y	125C/257F	7.30
1E	52	48	-	-	-	Y	118C/244F	7.30
2	80	-	15	5	-	N	154C/309F	7.85
3	90	-	-	10	-	Y	237C/459F	7.54
5	25	37.5	37.5	-	-	N	181C/358F	8.42
6	4.76	-	92.86*	2.38	-	Y	300C/572	11.03
7	50	-	50	-	-	N	210C/410F	8.86
9	12	70	18	-	-	N	167C/333F	7.79
10	25	-	75	-	-	N	260C/500F	9.97
11	5	-	95*	-	-	Y	313C/595F	11.06
12	5	-	90*	5	-	Y	310C/590F	11.00
70	40	40	20	-	-	N	130C/266F	7.86

71	48	52	-	-	-	Y	131C/268F	7.30
87	42	58	-	-	-	Y	145C/293F	7.30
150	19	-	81	-	-	Y	275C/527F	10.27
164	5	-	92.5*	2.5	-	Y	310C/590F	11.02
204	70	-	30	-	-	N	175C/347F	8.19
205	60	-	40	-	-	N	181C/358F	8.52
206	40	-	60	-	-	N	231C/448F	9.30
225	90	10	-	-	-	Y	151C/304F	7.31
227	20	77.2	-	2.8	-	Y	187C/369F	7.25
230	20	54	26	-	Doped with 0.12-0.16%	N	152C/306F	8.06
235	58	-	39	3	-	N	195C/383F	8.59
<b>INDALLOY METAL MIX</b>	<b>%INDIUM (In)</b>	<b>%TIN (Sn)</b>	<b>%LEAD (Pb)</b>	<b>%SILVER (Ag)</b>	<b>%COPPER (Cu)</b>	<b>RoHS*** Compliance</b>	<b>LIQUIDUS °C°F</b>	<b>DENSITY (gm/cm<sup>3</sup>)</b>
237	2	3	93*	2	-	Y	304C/579F	11.07
239	1	4	91*	4	-	Y	313C/595F	11.05
254	10	86.9	-	3.1	-	Y	205C/401F	7.37
290	97	-	-	3	-	Y	143.3C/290F	7.38
532*	20	54	26	-	-	N	152C/306F	8.06
NS	0.75	-	96.75*	2.5	-	Y	-	11.28
NS	2	98	-	-	-	Y	-	7.28
NS	10	-	90*	-	-	Y	-	10.79
NS	25	-	-	-	75	Y	-	8.48
NS	30	70	-	-	-	Y	-	7.29
NS	35	65	-	-	-	Y	-	7.29
NS	37	-	62.6	0.4	-	N	-	9.41
<b>INDALLOY METAL MIX</b>	<b>%INDIUM (In)</b>	<b>%TIN (Sn)</b>	<b>%LEAD (Pb)</b>	<b>%SILVER (Ag)</b>	<b>%COPPER (Cu)</b>	<b>RoHS*** Compliance</b>	<b>LIQUIDUS °C°F</b>	<b>DENSITY (gm/cm<sup>3</sup>)</b>
NS	38	62	-	-	-	Y	-	7.29
NS	20	40	40	-	-	N	-	8.50
NS	50	48	-	2	-	Y	-	7.34
NS	52.8	-	43.9	3.3	-	N	-	8.76
NS	59.65	-	-	-	40.35	Y	-	7.89
NS	65	35	-	-	-	Y	-	7.29
NS	75	-	25	-	-	N	-	8.01
NS	75	25	-	-	-	Y	-	7.29

<b>NS</b>	80	20	-	-	-	Y	-	7.30
<b>NS</b>	95	5	-	-	-	Y	-	7.30
<b>NS</b>	97	-	-	3	-	Y	-	7.37
<b>NS</b>	98	-	-	2	-	Y	-	7.34
<b>NS</b>	98	2	-	-	-	Y	-	7.30

Y = yes

N = no

NS = Non Standard Alloy Mixture

**\*\*\*RoHS = Restriction on Hazardous Substances (review applicable exemptions that may apply). EU 2011/65/EU.**

**\*Please review any exemptions that may apply. High content lead has been marked as compliant however customer must determine whether they can take the exemptions for this, otherwise the product is not compliant.**