

# 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. A table is provided at the end of this document that lists all metal groupings. To better serve all of our customers and reduce the paperwork burden, the 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 RMA-SMQ 51 A/C/AC OR INDALLOY WITH NC-SMQ 51 S/C/SC

FLUX VEHICLE (Specific metal grouping with flux is noted at the end of this document.)

SDS Number: SDS-IN 282 Revised Date: 5 JULY 2017

**Product Use:** Industrial Use - Rosin-based mildly activated solder paste consisting of a flux vehicle blended

with 83-92 weight percent of pre-alloyed metal powder. Used in soldering applications. Review

alloy table for metal mixtures with the same flux.

#### **MANUFACTURER:**

In America:

The Indium Corporation of America 34 Robinson Rd., Clinton, New York 13323

Information: (315) 853-4900 nswarts@indium.com

In Europe:

Indium Corporation of Europe 7 Newmarket Ct.

/ Newmarker Ct.

Kingston, Milton Keynes, UK, MK 10 OAG

Information: +44 [0] 1908 580400

In Asia:

The Indium Corporation of America

Asia-Pacific Operations-Singapore

29 Kian Teck Avenue Singapore 628908

Information: +65 6268-8678

**EMERGENCY PHONE:** 

CHEMTREC 24 hrs. USA: 1 (800) 424-9300

Outside USA: +1 (703) 527-3887

In China:

Indium Corporation (Suzhou), Co., Ltd.

No. 428 Xinglong Street Suzhou Industrial Park Suchun Industrial Square

Unit No. 14-C

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

#### 2. HAZARDS IDENTIFICATION

# **PRIMARY ROUTES OF ENTRY:**

# Carcinogen listed in

⊕Eye ⊕Inhalation ⊕Skin ⊕Ingestion NTP IARC OSHA ⊕Not Listed (See Section 11)

GHS:

Lead free:





Signal Word: Warning Hazard statement(s)

H317 May cause an allergic skin reaction

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled

H335 May cause respiratory irritation

EUH208 Contains rosin. May produce an allergic reaction

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)

#### Lead containing:







# Signal Word: Warning Hazard statement(s)

H303 May be harmful if swallowed (lead) H317 May cause an allergic skin reaction

H334 May cause allergy or asthma symptoms or breathing difficulties 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, will long lasting effects (lead)

EUH201A Warning! Contains lead (applicable only to the products listed that contain lead) Review listing.

EUH208 Contains rosin. May produce an allergic reaction

Precautionary statement(s)

P233 Keep container tightly closed

P261 Avoid breathing dust/fume/gas/mist/vapors/spray
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comfortable for breathing

P305 + 351 IF IN EYES: Rinse continuously with water for several minutes (15 mins)

#### Classification:

Specific target organ toxicity- repeated exposure – Category 2

Carcinogenicity (Category 2) (lead)

Reproductive toxicity (Category 2) (lead)

Skin sensitization - Category1B

Respiratory sensitization- Category1B

Acute aquatic toxicity - Category 1 for lead containing products

Chronic aquatic toxicity – Category 1 for lead containing products

For product containing both lead and antimony the Acute and Chronic Classification is (Category 2)

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#### **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 eye irritation.

**Ingestion:** Contains metal alloy and organic chemicals. May be harmful.

**Inhalation:** Vapors or fumes from this material at typical re-flow temperatures over 100°C may cause local

irritation to the respiratory system. Lead fumes, where applicable, may be harmful. Rosin may cause

occupational asthma.

**Skin Contact:** May cause skin irritation. ANTIMONY has been known to cause dermatitis.

**Chronic:** 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.

<u>SILVER:</u> Chronic skin contact or ingestion of silver dust, salts, or fume can result in a condition

known as Argyria, a condition with bluish pigmentation of the skin and eyes.

<u>TIN:</u> Has been shown to increase incidence of sarcoma in animal tests.

BISMUTH: May cause kidney damage.

INDIUM: May cause damage to respiratory system.

<u>COPPER</u>: 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.

<u>ZINC</u>: Fresh fume inhaled may cause a disease known as "brass founders", throat dryness, cough, weakness, generalized aching, fever, nausea and vomiting.

WARNING: This product contains a chemical known to the State of California to cause cancer and/or

birth defects (or other reproductive harm). Applicable in California.

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. US Federal law prohibits

the use of leaded solder in making joints or fittings of any private or public water supply

system. Keep out of the reach of children. Not intended for household use.

3. COMPOSITION / INFORMATION ON INGREDIENTS											
Components	%	CAS Registry #/EINECS#	<b>PEL</b> mg/m³	TLV-TWA mg/m³	TLV-STEL mg/m³						
TIN	*	7440-31-5/231-141-8									
		(US)	2	2	-						
		(EU)	-	2	4						
		(Canada)	-	2	4						
		(Singapore)	2	-	-						
LEAD	*	7439-92-1/231-100-4									
		(US)	0.05	0.05	-						
		(EU)	N.E.	0.15	-						
		(Canada)	0.05	0.05	-						
		(China)	-	0.05(dust) 0.03(fume)	-						
		(Mexico)	-	0.15	-						
		(Singapore)	0.15	-	-						
SILVER	*	7440-22-4/231-131-3									
		(US)	0.01	0.1	-						
		(EU)	-	0.1	-						

		(Canada)		0.1	0.3
			-		0.3
		(Mexico)	-	0.1	-
		(Singapore) 7440-74-6/231-180-0	0.1	-	-
INDIUM	DIUM *				
		(US)	0.1	0.1	-
		(EU)	-	0.1	0.3
		(Canada)	-	0.1	0.3
		(China)	-	0.1	0.3
		(Mexico)	-	0.1	0.3
		(Singapore)	0.1	-	-
GOLD	*	7440-57-5/231-165-9	N.E.	N.E.	N. <u>E</u> .
GERMANIUM	*	7440-56-4/231-164-3	N.E.	N.E.	N.E.
BISMUTH	*	7440-69-9 /231-177-4	N.E.	N.E.	N.E.
ANTIMONY	*	7440-36-0/231-146-5			
		(US)	0.5	0.5	-
		(EU)	0.5	-	-
		(Canada)	-	0.5	1.5
		(China)	-	0.5	-
		(Mexico)	-	0.5	-
		(Singapore)	0.5	-	-
COPPER	*	7440-50-8/231-159-6			
		(US)	0.1 (fume)	0.2 (fume)	-
		(EU)	_	0.2 (fume)	-
		(Canada)	_	0.2 (fume)	0.6 (fume)
		(Mexico)	_	0.2(fume)	2
		(China)	-	0.2	0.6
		(Singapore)	0.2(fume)	1(dust)	- -
ZINC	*	7440-66-6/231-175-3	N.E.	N.E.	N.E.
ROSIN	5.0-6.0	65997-05-9 (US)	N.E.	N.E.	N.E.
		(EU)	0.05	N.E. 0.15	(sensitiser)

POLYGLYCOL ETHER 2.0 - 4.09038-95-3 N.F. N.E. N.E.

N.E. N.E. MODIFIED CASTER OIL 1.0 - 7.061788-85-0 N.E.

\*See alloy table at the end of document

N.E. = Not established

#### 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 established. Not established. Method:

Not established. **Auto-ignition Temperature:** 

Flammable Limits: Limits not established.

**Extinguishing Media:** Use extinguisher appropriate for the surrounding fire conditions.

Special Fire Fighting Firefighters must wear NIOSH approved self-contained breathing apparatus and full

Procedures: protective clothing.

# 6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Using a spatula, scoop up paste and place in a plastic or glass jar and tightly

> cap. Remove traces of paste residue using cloth rags or paper towels moistened with ethyl or isopropyl alcohol. Dispose contaminated cloth rags or paper towels following all Federal, State and Local regulations. In the EU refer to the Special Waste

Regulations.

#### HANDLING AND STORAGE

Handling Keep containers tightly closed when not in use. Use care to avoid spills. Use only with **Precautions:** 

production equipment specifically designed for use with solder paste. Wear appropriate

personal protective equipment when working or handling solder paste. Always thoroughly

wash your hands after handling this product. DO NOT touch or rub eyes until hands are

washed.

Storage Precautions: Store product in tightly capped original containers in a cool, dry area. Refer to product

label for specific storage temperature requirements. Rotate stock to ensure use before

expiration date on the label.

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

**Engineering Controls:** Use only with production equipment (such as stencil printers and re-flow furnaces) with

adequate ventilation and other safety features specifically designed for use

with solder paste. Control concentration of all components so that they're permissible

exposure levels are not exceeded. Protect workers from potential exposures.

Personal protection:

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

Respirator: An approved or compliant marked air-purifying respirator with a fume/organic chemical

> cartridge is recommended under certain circumstances (i.e. when re-flowing manually on a hot plate instead of a ventilated re-flow furnace) where airborne concentrations are expected to exceed exposure limits. Lead containing products require that ventilation be provided to ensure workers are

protected from potential exposures.

Skin: Compatible chemical resistant gloves. Latex gloves are not recommended.

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. DO NOT allow rags or **Practices:** paper towels contaminated with solder paste to accumulate in the work area. 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.

#### PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Grey colored paste. **Boiling Point:** Not applicable. **Melting Point:** Odor: Mild characteristic odor. Not applicable **Specific Gravity:** Not applicable. :Ha 5 - 8 (flux)

**Vapor Pressure:** Solubility in Water: Not applicable. Insoluble (paste) **Vapor Density:** (air=1) Not applicable. **Volatile Organics:** <132,700 ug/kg

#### STABILITY AND REACTIVITY 10\_

General: Stable.

**Conditions to Avoid:** Not established.

**Incompatible Materials:** Avoid contact with acids, bases or oxidizing agents.

**Hazardous Decomposition /** Harmful organic fumes and toxic oxide fumes may form at elevated

Combustion: temperatures.

**Hazardous Polymerization:** Will not occur.

# 11. TOXICOLOGICAL INFORMATION

Carcinogenicity: NTP: No

**OSHA:** No 29CFR1910.1025

**IARC:** Yes Lead and lead compounds are listed as possible carcinogens.

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

Other: Chronic Toxicity: Prolonged or repeated exposure to rosin flux fume may cause workers to develop occupational

asthma. Lead can cause potential harm to the developing fetus.

## 12. ECOLOGICAL INFORMATION

Product has not been tested.

#### 13. DISPOSAL CONSIDERATION

Waste Disposal Method: Scrap metal alloy usually has value. Contact a commercial reclaimer for

recycling. Otherwise, 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 regulated under US DOT (United States Department of Transportation).

Non hazardous for shipping (ground / IATA/ Ocean).

UN – none

Marine Pollutant: No

North American Emergency Guide Book - Not applicable

#### 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.).

California PROP 65 Safe Drinking Water Standard: WARNING: Applicable in California

This product contains a chemical(s) known to the State of California to cause cancer and/or birth defects (or other reproductive harm). (lead)

USEPA -SARA 313 Listing - 40 CFR 372.65

Lead CAS# 7439-92-1 Silver CAS# 7440-22-4 Copper CAS# 7440-50-8

Zinc CAS# 7440-66-6

Antimony CAS# 7440-36-0

USEPA Genetic Toxicology Program – Lead CAS# 7439-92-1

All ingredients are listed on the EPA TSCA Inventory.

This product has been classified in accordance with the Mexican regulations, NOM-018-STPS-2015 and NOM-010-STPS-2014.

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 Effects-Very Toxic Material (Chronic) (lead)



D2B -Materials Causing Other Toxic Effects -skin irritation

Ingredients are listed on the Canadian Domestic Substance List.

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

For compliance with EU directive 2011/65/EU, Restriction of Hazardous Substances (RoHS) 2 see alloy table.

Regulatory Information China:

GB/T 16483-2008, GB/T 17519-2013, Safety Data Sheets for Chemical Products

GB 30000.2-29-2013, Rules for classification and labeling of chemicals (GHS)

Decree No. 591: Regulations on the Control Over Safety of Hazardous Chemicals.

This product has been classified using the Chinese Occupational Exposure Limit of Hazardous Agents in the Workplace, GBZ2-2007.

#### Malaysia:

This product has been classified in accordance with: Malaysian – OCCUPATIONAL SAFETY AND HEALTH (CLASSIFICATION, LABELING AND SAFETY DATA SHEET OF HAZARDOUS CHEMICALS) REGULATION OCTOBER 2013 - (CLASS).

#### **16. OTHER INFORMATION**

**HMIS Hazard Rating:** Health: 2 Fire: 1

Physical Hazard: 0

Revised Date: 5 JULY 2017

Prepared by: Nancy Swarts, Indium Corporation of America

Approved by: Nancy Swarts, Indium Corporation of America

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**

ALLOT TABLE	%Sn	%Pb	%Ag	%ln	%Bi	%Sb	%Cu	%Zn	%Au	%Ge	RoHS 2
INDALLOY	Tin	Lead	Silver	Indium	Bismuth	Antimony	Copper	Zinc	Gold	Germanium	Compliance
Metal Alloy Mix						,					
9	58.1-	14.9-16.6	-	10-11	-	-	-	-	-	-	NO
(Sn70/Pb18/In12)	64.4										
10	-	63.3-69	-	20.8-23	-	-	-	-	-	-	NO
(Pb75/In25)											
42	28-31.3	17-18.4	-	-	38-42.3	-	-	-	-	-	NO
Bi46/Sn34/Pb20)											
97	35.7-	35.7-39.6	-	-	11.6-	-	-	-	-	-	NO
Sn43/Pb43/Bi14)	39.6				12.9						
100	52.0-	30.7-34.0	.3337	-	-	-	-	-	-	-	NO
(Sn62.6/Pb37/	57.6										
Ag0.4)											
104	51.9-	29.9-33.2	1.2-1.8	-	-	-	-	-	-	-	NO
(Sn62/Pb36/Ag2)	57.5										
106	52.3-58	30.7-34	-	-	-	-	-	-	-	-	NO
(Sn63/Pb37)											
109	49.8-	33.2-36.8	-	-	-	-	-	-	-	-	NO
(Sn60/Pb40)	55.2										
111	33.6-	46-51	-	-	3.3-3.7	-	-	-	-	-	NO
(Pb55.5/Sn40.5/	37.3										
Bi4)											
116	41.5-46	41.5-46	-	-	-	-	-	-	-	-	NO
(Sn50/Pb50)											
118	74.7-	8.3-9.2	-	-	-	-	-	-	-	-	NO
(Sn90/Pb10)	82.8										
121	80.1-	-	2.9-3.2	-	-	-	-	-	-	-	YES
Sn96.5/Ag3.5)	88.8										
122	78.9-	4.2-4.6	-	-	-	-	-	-	-	-	NO
(Sn95/Pb5)	87.4										
127	30.7-34	49.8-55.2	2.5-2.8	-	-	=	-	-	-	-	NO
Pb60/Sn37/Ag3)											
128	83-92	-	-	-	-	-	-	-	-	-	YES
(Sn100)											
129	82.2-	-	-	-	-	083-0.92	-	-	-	-	YES
(Sn99/Sb1)	91.1										

Indalloy MetalAlloyMix	%Sn	%Pb	%Ag	%In	%Bi	%Sb	%Cu	%Zn	%Au	%Ge	RoHS 2 Compliance
130 (Pb60/Sn40)	33.2- 36.8	49.8-55.2	-	-	-	-	-	-	-	-	NO
131 (Sn97/Sb3)	80.5- 89.2	-	-	-	-	2.5-2.8	-	-	-	-	YES
132 (Sn95/Ag5)	78.9- 87.4	-	4.2-4.6	-	-	-	-	-	-	-	YES
133 (Sn95/Sb5)	78.9- 87.4	-	-	-	1	4.2-4.6	-	1	-	-	YES
141 (Pb70/Sn30)	24.9- 27.6	58.1-64.4	-	-	1	-	-	1	-	-	NO
143 (Pb90/Sb10)	-	74.7-82.8	-	-	-	8.3-9.2	-	-	-	-	YES with exemption
145 Pb75/Sn25)	20.8-23	62.3-69	-		1	-	-	1	-	-	NO
149 (Pb80/Sn20)	16.6- 18.4	66.4-73.6	-	-	-	-	-	-	-	-	NO
150 (Pb81/ln19)	-	67.2-74.5	-	15.8-17.5	-	-	-	-	-	-	NO
151 (Pb92.5/Sn5/ Ag2.5)	4.2-4.6	76.8-85	2-2.3	-	-	-	-	-	-	-	YES with exemption
152 (Pb92/Sn5/Sb3)	4.2-4.6	76.4-85.6	-	-	-	2.5-2.8	-	-	-	-	YES with exemption
155 (Pb90/Ag5/Sn5)	4.2-4.6	74.7-82.8	4-4.6	-	-	-	-	-	-	-	YES with exemption
159 (Pb90/Sn10)	8.3-9.2	74.7-82.8	-	-	-	-	-	-	-	-	YES with exemption
160 (Sn97/Cu3)	80.5- 89.2	-	-	-	-	-	2.5-2.8	-	-	-	YES
161 (Pb97.5/Ag2.5)	-	80.9-89.7	2-2.3	-	-	-	-	-	-	-	YES with exemption
163 (Pb95.5/Ag2.5/ Sn2)	1.7- 1.9	79.3-87.9	2.1-2.3		-	-	-	-	-	-	YES with exemption

# INDALLOY WITH RMA-SMQ51/A/C/AC AND NC-SMQ51S/C/SC

3D3 -IN 202				II ID/ L	LO 1 VVII	TTTCIVIT CIT	11001/1100	IT COTTINE	110-3141Q3	10/0/00	
Indalloy	%Sn	%Pb	%Ag	%In	%Bi	%Sb	%Cu	%Zn	%Au	%Ge	RoHS 2 Compliance
Metal Alloy Mix											
164 (Pb92.5/ln5/Ag2.5)	-	76.8-85.1	2.1-2.3	4.2-4.6	-	-	-	-	-	-	YES with exemption
165 (Pb97.5/Ag1.5/	0.8-0.9	80.9-89.7	1.2-1.4	-	-	-	-	-	-	-	YES with exemption
Sn1)											
171 (Pb95/Sn5)	4.2-4.6	78.9-87.4	-	-	-	-	-	-	-	-	YES with exemption
175	-	78.9-87.4	4.2-4.6	-	-	-	-	-	-	-	YES with exemption
(Pb95/Ag5) 182 (Au80/Sn20)	16.6- 18.4	-	-	-	-	-	-	-	66.4-73.6	-	YES
183 (Au88/Ge12)	-	-	-	-	-	-	-	-	73-81	10-11	YES
201 (Sn91/Zn9)	75.5- 83.7	-	-	-	-	-	-	7.5-8.3	-	-	YES
206 (Pb60/In40)	-	49.8-55.2	-	33.2-36.8	-	-	-	-	-	-	NO
209 (Sn65/Ag25/Sb10)	54-59.8	-	20.8-23	-	-	8.3-9.2	-	-	-	-	YES
227 (Sn77.2/ln20/	64-71	-	2.3-2.6	16.6-18.4	-	-	-	-	-	-	YES
Ag2.8)  228 (Pb88/Sn10/Ag2)	8.3-9.2	73-81	1.7-1.8	-	-	-	-	-	-	-	YES with exemption
233 (Pb85/Sb10/Sn5)	4.2-4.6	70.6-78.2	-	-	-	8.3-9.2	-	-	-	-	YES with exemption
236 (Pb83/Sb10/Sn5/ Ag2)	4.2-4.6	68.9-76.4	1.7-1.8	-	-	8.3-9.2	-	-	-	-	NO
238 (Sn90/Au10)	74.7- 82.8	-	-	-	-	-	-	-	8.3-9.2	-	YES

# INDALLOY WITH RMA-SMQ51/A/C/AC AND NC-SMQ51S/C/SC

3D3 -IN 202		1	l		1			AC AND	1	1	
Indalloy	%Sn	%Pb	%Ag	%In	%Bi	%Sb	%Cu	%Zn	%Au	%Ge	RoHS 2 Compliance
Metal Alloy Mix											
240 (Sn46/Pb46/Bi8)	38.2- 42.3	38.2-42.3	-	-	6.6-7.4	-	-	-	-	-	NO
241 (Sn95.5/Ag3.8/ Cu0.7)	79-87.9	-	3.2-3.5	-	-	-	0.58- 0.64	-	-	-	YES
244 (Sn99.3/Cu0.7)	82.4- 91.4	-	-	-	-	-	0.58- 0.64	-	-	-	YES
249 (Sn91.8/Bi4.8/ Ag3.4)	76.2- 84.5	-	2.8-3.1	-	4-4.4	-	-	-	-	-	YES
255 (Bi55.5/Pb44.5)	-	36.9-40.9	-	-	46-51	-	-	-	-	-	NO
256 (96.5Sn/3Ag/ 0.5Cu)	80-88.8	-	2.5-2.8	-	-	-	0.42- 0.46	-	-		YES
259 (Sn90/Sb10)	74.7- 82.8	-	-	-	-	8.3-9.2	-	-	-	-	YES
264 (91.5Sn/8.5Sb)	75.9- 84.2	-	-	-	-	7.06-7.8	-	-	-	-	YES
266 (93.5Pb/5Sn/1.5Ag	4.2-4.6	77.6-86	1.2-1.4	-	-	-	-	-	-	-	YES with exemption
281 (Bi58/Sn42)	34.9- 38.6	-	-	-	48.1- 53.4	-	-	-	-	-	YES
281-338 (Sn60/Bi40)	49.8- 55.2	-	-	-	33.2- 36.8	-	-	-	-	-	YES
NS (Sn25/Au75)	20.8-23	-	-	-	-	-	-	-	62-69	-	YES
NS (Sn30/Au70)	24.9- 27.6	-	-	-	-	-		-	58-64.4	-	YES
NS (Sn5/Pb93.5/Ag1.5)	4.2-4.6	77.6-86	1.2-1.4	-	-	-	-	-	-	-	YES with exemption
NS (Sn15/Pb82.5/ Ag2.55)	12.5- 13.8	68.5-75.9	2.1-2.3	-	-	-	-	-	-	-	NO

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## INDALLOY WITH RMA-SMQ51/A/C/AC AND NC-SMQ51S/C/SC

	1										
NS	16.6- 18.4	63.9-70.8	2.5-2.8	-	-	-	-	-	-	-	NO
(Sn20/Pb77/Ag3	10.4										
NS	79.7-	-	3.3-3.7	-	-	-	-	-	-	-	YES
(Sn96/Ag4)	88.3										
NS	2.9-3.2	70.1-78.2	-	-	-	9.5-10.6	-	-	-	-	NO
(Sn3.5/Pb84.5/											
Sb12)											

# NS = Non Standard Alloy Mix

RoHS2 = Restriction of Hazardous Substances (2011/65/EU). Please review any applicable exemptions that may apply. This information is provided as information only. It is the responsibility of the customer to determine compliance with their particular specifications and restrictions.