

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

SAFETY DATA SHEET

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.

1. PRODUCT AND COMPANY IDENTIFICATION

General Product Class Identifier: INDALLOY WITH INDIUM9.0E

(View product table for individual product descriptions)

SDS Number: SDS-6000S Revised Date: 17 JULY 2014

Product Use: Industrial Use -No-clean solder paste consisting of a flux vehicle blended with an 83-92 % pre-

alloyed metal powder used for solder applications.

FOR CHEMICAL EMERGENCY ONLY PHONE *:

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

Outside USA: +1 (703) 527-3887

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

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

MANUFACTURER:

In America:

The Indium Corporation of America 1676 Lincoln Ave., Utica NY 13502 Safety Information: (315) 853-4900

nswarts@indium.com

In Europe:

Indium Corporation of Europe 7 Newmarket Ct. Kingston, Milton Keynes, UK, MK 10 OAG Information: +44 [0] 1908 580400

In Asia:

Indium Corporation of America Asia-Pacific Operations-Singapore 29 Kian Teck Avenue Singapore 628908

Information: +65 6268-8678

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

http://www.indium.com

2. HAZARDS IDENTIFICATION

GHS





Signal Word: Warning

Hazard statement(s)

H315 Causes skin irritation

H317 May cause an allergic skin reaction

H319 Causes serious eye irritation

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)

PRIMARY ROUTES OF ENTRY: CARCINOGEN LISTED IN:

⊗Eye ⊗Inhalation ⊗Skin ⊗Ingestion NTP IARC OSHA ⊗Not Listed

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: Irritating to digestive tract. May cause burns.

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

irritation to the respiratory system. Rosin fume may cause occupational asthma.

Skin Contact: May cause skin irritation. Rosin and antimony may cause dermatitis.

Chronic:

SILVER: 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.

TIN: Has been shown to increase incidence of sarcoma in animal tests. Chronic exposure to tin dusts and fume may result in "stannosis" a mild form of pneumoconiosis.

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.

WARNING: Applicable only in the State of California: This product contains a chemical (s) known to the

State of California to cause cancer and/or birth defects (or other reproductive harm). (trace

levels of lead not intentionally added)

NOTE: The Indium Corporation does not recommend, manufacture, market or endorse any of its

products for human consumption.

Components	% wt	CAS Registry #/EINECS#	PEL 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	-	-
SILVER	*	7440-22-4/231-131-3			
		(US)	0.01	0.1	-
		(EU)	-	0.1	-
		(Canada)	N.E.	0.1	0.3
		(Singapore)	0.1	-	-
		(Mexico)	0.1	-	-
COPPER	*	7440-50-8/231-159-6			
		(US)	0.1	0.2	-
		(EU)	-	0.2 (fume)	2(dust)
		(Canada)	-	0.2	0.6
		(Singapore)	0.2(fume)	1(dust)	-
		(Mexico)	0.2	-	2
		(China)	-	0.2(fume)	0.6(fume)

ROSIN	4.0-7.0	65997-05-9 (US)	N.E.	N.E.	N.E.	
		(EU)	0.05	-	0.15 (sensitiser)	
POLYGYLCOL ETHER	3.0-5.0	9038-95-3	N.E.	N.E.	N.E.	
NON HAZARDOUS PROPRIETARY	1.0-6.0	-	N.E.	N.E.	N.E.	

PRODUCT DOES NOT CONTAIN ANY EU LISTED SUBSTANCES OF VERY HIGH CONCERN (SVHC)

Symbol: XI Risk Phrases: R36/37/38, R42/43

N.E. = Not established * See Alloy Table

ALLOY TABLE (DATA)

%Metal Mix in Flux

Indalloy Mixture (%Metal)	%TIN Sn	%SILVER Ag	%COPPER Cu	RoHS 2* Compliance
241	79.2-87.9	3.2-3.5	0.58-0.64	YES
(SAC 387)				
(95.5Sn/3.8Ag/0 .7Cu)				
256	80.1-88.8	2.5-2.8	0.42-0.46	YES
(SAC 305)				
(96.5Sn/3Ag/0.5 Cu)				

^{*}RoHS = Restriction of Hazardous Substances (2011/65/EU)

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. Method: Not established.

Auto-ignition Temperature: Not established.

Flammable Limits: Limits not established.

Extinguishing Media: Use extinguishers 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. Material may have reclaim value.

7. HANDLING AND STORAGE

HandlingKeep containers tightly closed when not in use. Use care to avoid spills. Use only with production equipment specifically designed for use with solder paste. Wear appropriate

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 (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 exposure levels

are not exceeded.

Personal protection:

Eyes: Chemical safety glasses/goggles. Face shield for 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 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. Nitril disposable glove or other rubber glove. Latex not

recommended.

Other: Lab coat, eyewash 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 paper towels contaminated with solder paste to accumulate in the work area. Good

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Grey colored paste. **Boiling Point:** Not applicable. Appearance: Odor: Mild characteristic odor. **Melting Point:** Not applicable **Specific Gravity:** 4 -8 (flux) 1 g/cc pH:

V-apor Pressure: Not applicable. Solubility in Water: Insoluble (paste)

Vapor Density: (air=1) Not applicable.

10. STABILITY AND REACTIVITY

General: Stable.

Conditions to Avoid: Not established.

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

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

Combustion: temperatures.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

NTP: No Carcinogenicity:

> OSHA: No IARC: No

LD50: Not established. LC50: Not established.

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

asthma.

12. ECOLOGICAL INFORMATION

Product not tested.

DISPOSAL CONSIDERATION 13.

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 (US Department of Transportation).

Not hazardous under shipping regulations.

UN - none.

North American Emergency Guide Book - Not applicable

15. REGULATORY INFORMATION

GHS= Globally Harmonized System

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 hazard criteria of the Canadian Controlled Products Regulation (CPR).



Canadian WHMIS:

D2B – Materials Causing Other Toxic Effects (skin irritation/skin sensitization)

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

This product SDS includes exposure information in accordance with Mexican regulations NOM-018-STPS-2000 and NOM-010-STPS-1999 and the Chinese Occupational Limit for Hazardous Agents in the Workplace, GBZ2-2002.

For compliance with EU Directive 2002/95/EC, Restriction of Hazardous Substances (RoHS), see Alloy Table.

California PROP 65 (Safe Drinking Water Standard): WARNING:

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

SARA 313 Listing - 40 CFR 372.65 Silver / Copper

All ingredients are listed on the EPA TSCA Inventory.

EC Classification, Packaging and Labeling Requirements:

Symbol and Hazard Classification of Product

Χi

Risk Phrases:

R36/37/38 Irritating to eyes, respiratory system and skin

R42/43 May cause sensitization by inhalation and skin contact

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

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

16. OTHER INFORMATION

HMIS Hazard Rating: Health: 2

Fire: 1 Reactivity: 0

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