



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

**SAFETY DATA SHEET**

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Identifier:** WF-9942 NO-RESIDUE LEAD FREE FLUX

**SDS Number:** SDS-4159

**Revised Date:** 23 MARCH 2017

**Product Use:** INDUSTRIAL USE (mixture) - WAVE SOLDER FLUX

**MANUFACTURER:**

**In America:**

The Indium Corporation of America  
34 Robinson Rd., Clinton, New York 13323  
Information: (315) 853-4900  
[nswarts@indium.com](mailto:nswarts@indium.com)

Chicago Materials Division  
80 Scott St.  
Elk Grove Village, Illinois 60007

**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

**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:

Eye    Inhalation    Skin    Ingestion

### Carcinogen listed in

NTP    IARC    OSHA    Not Listed

GHS:



Signal Word: Danger

### Hazard Statement(s):

H225            Highly Flammable liquid and vapor  
 H319            Causes serious eye irritation  
 H336            May cause drowsiness or dizziness

### Precautionary statement(s)

P210            Keep away from heat/sparks/open flames/hot surfaces. – No smoking  
 P233            Keep container tightly closed  
 P240            Ground container and receiving equipment  
 P242            Use spark resistant tools  
 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 + P364    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)

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 Isopropyl alcohol:

Flammable Liquid - Category 2  
 Serious eye damage/eye irritant - Category 2  
 Specific target organ systemic toxicity (single exposure) – Category 3 Central Nervous system

### POTENTIAL HEALTH EFFECTS:

**Eye Contact:**    Vapors may be irritating, liquid may damage eye tissue.

**Ingestion:**        May cause irritation.

**Inhalation:**       Vapor may cause headaches and or dizziness. Avoid inhalation of vapors. May cause irritation to respiratory tract.

**Skin Contact:**    Prolonged contact may cause irritation.

**Chronic:** Over exposure to vapors may be harmful. Not established.

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

**WARNING:** Applicable 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). (Contains trace amounts of 1, 4 Dioxane not intentionally added)

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Components	% wt	CAS Registry #/EINECS	PEL mg/m <sup>3</sup>	TLV-TWA mg/m <sup>3</sup>	TLV-STEL mg/m <sup>3</sup>
ISOPROPANOL	80-90	67-63-0/200-661-7			
		(US)	980	983	1225
( PROPAN-2-OL)		(EU)	-	999	1250
		(Canada)	-	983	1228
		(Mexico)	980	-	1225
		(China)	-	350	700
		(Singapore)	983	-	1230
PROPRIETARY	1-20	-	N.E.	N.E.	N.E.

N.E. = Not established

EU = European Exposure Limits

### 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:** 12°C (54°F)      **Method:** Closed Cup

**Auto-ignition Temperature:** 750 F

**Flammable Limits:** Upper: 12 @77°F; Lower 2 @ 77°F

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

**Special Fire Fighting**

**Procedures:** Wear protective clothing and self-contained breathing apparatus. Use water to cool fire exposed containers. Flammable vapors may travel great distances to ignition source and flash back.

## 6. ACCIDENTAL RELEASE MEASURES

**Spill or Leak Procedures:** Do not allow material to enter sewer system or waterway. Wear personal protective equipment. Eliminate sources of ignition. Ventilate area in accordance with regulations. 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. Wear personal protective equipment. Ground containers. Keep away from sources of ignition and heat.

**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:** Face velocity >2.1 cubic feet/minute in confined areas. Overall general exhaust ventilation recommended in order to keep exposures to as low as possible. Do not use in confined areas unless vented properly.

### Personal protection:

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

**Respirator:** An authority approved or compliant marked air-purifying respirator with a fume/organic chemical cartridge is recommended where airborne concentrations are expected to be elevated. Use respiratory protection in confined areas. Air purifying respirators will offer no protection in oxygen deficient areas. Ensure that the protection factors of the respirator are not exceeded.

**Skin:** Compatible chemical resistant gloves. Use gloves such as nitrile, which are compatible with alcohols. Latex gloves are not recommended.

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

**Work/Hygienic Practices:** 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.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Colorless	<b>Boiling Point:</b>	80°C (175°F)
<b>Odor:</b>	Alcohol odor.	<b>Evaporation Rate:</b>	1.7
<b>Specific Gravity:</b>	0.833 +/- 0.003 @ 60° F	<b>pH:</b>	4.0
<b>Vapor Pressure:</b>	33 mm HG @ 68 F	<b>Solubility in Water:</b>	Soluble
<b>Vapor Density:</b>	2.1 (air=1)	<b>% Volatiles by volume:</b>	90

### 10. STABILITY AND REACTIVITY

**General:** Stable.

**Conditions to Avoid:** Direct heat, open flames and storage in aluminum.

**Incompatible Materials:** Anhydrides, halogens, phosphorus, trichlorides, monomers, aldehydes

**Hazardous Decomposition / Combustion:** Carbon dioxide/carbon monoxide.

**Hazardous Polymerization:** Will not occur.

### 11. TOXICOLOGICAL INFORMATION

**Carcinogenicity:** National Toxicity Program **NTP:** No  
 Occupational Safety & Health Administration **OSHA:** No  
 International Agency for Research on Cancer **IARC:** No

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

Oral LD50 (isopropyl alcohol)  
 LD50 Oral- rat- 5,045 mg/kg  
 Inhalation LC50 (isopropyl alcohol)  
 LC50 inhalation-rat-8h-16000 ppm  
 Dermal LD50  
 LD50 – Dermal- rabbit-12,800 mg/kg  
 RTECS: Isopropyl alcohol NT8050000

### 12. ECOLOGICAL INFORMATION

Product not tested.  
 LC50-Pimephales promelas (fathead minnow)- 9,640 mg/l – 96h (isopropyl alcohol)  
 EC50-Daphnia magna (water flea) – 5,102 mg/l – 24h (isopropyl alcohol)

### 13. DISPOSAL CONSIDERATION

**Waste Disposal Method:** Dispose of in accordance with all Federal, State and Local environmental regulations.

## 14. TRANSPORT INFORMATION

Transport in accordance with applicable regulations and requirements. Regulated under DOT (Department of Transportation and IATA)

UN1219, Isopropanol, 3, PG II



North American Emergency Guide Book – Guide # 129

Marine Pollutant: No

## 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.).

**WARNING:** This product contains a chemical (s) known to the State of California to cause cancer and/or birth defects (or other reproductive harm). (Contains trace amounts of 1, 4 Dioxane)

SARA 313 Listing - 40 CFR 372.65: trace amounts of 1, 4 Dioxane

All ingredients are listed on the EPA TSCA Inventory.

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

Canadian WHMIS: Class B Division 2 Flammable, D2B Toxic Material Causing Other Toxic Effects (eye irritation in animals).



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 in accordance with Mexican regulations: NOM-018-STPS-2015 and NOM-010-STPS-2014.

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 for Hazardous Agents in the Workplace, GBZ2-2007.

RoHS 2 (Restriction of Hazardous Substances) Compliance Statement: This product complies with the requirements of the

EU Directive 2011/65/EU regarding the restriction of certain hazardous substances in electronic equipment. This product does not contain any metals and does not contain any flame-retardants.

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

<b>HMIS Hazard Rating:</b>	<b>Health:</b>	2
	<b>Fire:</b>	3
	<b>Reactivity:</b>	0

**Revised Date:** 23 MARCH 2017

**Prepared by:** Nancy Swarts, Indium Corporation of America

**Approved by:** Nancy Swarts, Indium Corporation of America

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Note: This SDS may be translated into an international language. If there is any misinterpretation or misunderstanding of any words or phrases that may occur within any translation the ENGLISH language shall always prevail.