



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

**SAFETY DATA SHEET**

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Identifier:** WF-9945 LEAD FREE ROSIN FLUX

**MSDS Number:** MSDS-4710

**Revised Date:** 19 AUGUST 2011

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

**MANUFACTURER:**

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**2. HAZARDS IDENTIFICATION**

**PRIMARY ROUTES OF ENTRY:**

Eye    Inhalation    Skin    Ingestion    NTP    IARC    OSHA    Not Listed

**Carcinogen listed in**

GHS



Flammable Liquid – Category 2

Signal Word: Danger

Hazard Statements:

H225	Highly Flammable liquid and vapor
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
H336	May cause drowsiness or dizziness
EUH208	Contains rosin. May produce an allergic reaction

Precautionary statement(s)

P210	Keep away from heat/sparks/open flames/hot surfaces. – No smoking
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
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

#### POTENTIAL HEALTH EFFECTS:

**Eye Contact:** Vapors may be irritating, liquid may cause irritation to eye tissue.

**Ingestion:** May cause persistent nausea, vomiting and abdominal pain. Irritating to digestive tract.

**Inhalation:** Vapor may cause headaches and or dizziness. Avoid inhalation of vapors. Irritating to respiratory tract. Rosin may cause occupational asthma.

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

**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.**

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Components	% wt	CAS Registry #	PEL mg/m <sup>3</sup>	TLV-TWA mg/m <sup>3</sup>	TLV-STEL mg/m <sup>3</sup>
ISOPROPANOL	80-86	67-63-0 (US)	980	983	1225
( PROPAN-2-OL)		(EU)	-	999	1250
		(Canada)	-	983	1228
		(Mexico)	980	-	1225

		(China)	-	350	700
		(Singapore)	983	-	1230
<b>MINERAL SPIRITS</b>	10-15	8052-41-3	2900	572	-
		(Canada)	-	525	1050
<b>ROSIN</b>	5-12	65997-05-9	N.E.	N.E.	N.E.
		(EU)	0.05	-	0.15
<b>PROPRIETARY ACTIVATORS</b>	1-3		N.E.	N.E.	N.E.

Symbol: XI, F

Risk Phrases: R36/37/38, R11, R42/43

N.E. = Not established

EU = European Exposure Limits

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

#### 4. FIRST AID MEASURES

- Eye Contact:** Hold eyelids apart and flush eyes with plenty of 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 (isopropanol)
- Flammable Limits:** Upper: 12 @77°F; Lower 2 @ 77°F (isopropanol)
- 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. Use in well vented areas.

**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 exhaust ventilation. Recommended in order to keep exposures to as low as possible.

### 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 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. Do not use latex gloves for handling of product.

**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>	Amber liquid	<b>Boiling Point:</b>	Not available
<b>Odor:</b>	Alcohol odor.	<b>Evaporation Rate:</b>	Not available
<b>Specific Gravity:</b>	0.802 g/cc	<b>pH:</b>	5.8
<b>Vapor Pressure:</b>	Not available	<b>Solubility in Water:</b>	Soluble
<b>Vapor Density:</b>	Not available		

## 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.

## 12. ECOLOGICAL INFORMATION

This section is subject to future development.

Product not tested.

## 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.

UN1987, Alcohols, N.O.S., 3, PG II (isopropanol, mineral spirits)



North American Emergency Guide Book – Guide # 127

## 15. REGULATORY INFORMATION

The information in this Material 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: 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-2000 and

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: none

All ingredients are listed on the EPA TSCA Inventory.

EC Classification, Packaging and Labeling Requirements:

Symbol and Hazard Classification of Product

XI ,F

**Risk Phrases:**

- R36/37/38 Irritating to eyes, respiratory system and skin
- R 11 Highly Flammable
- R42/43 May cause sensitization by inhalation and skin contact

**Safety Phrases:**

- S16 Keep away from sources of ignition - "No Smoking"
- 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
- S62 If swallowed, do not induce vomiting seek medical advice immediately and show container or label
- S7 Keep container tightly closed

RoHS (Restriction of Hazardous Substances) Compliance Statement: This product complies with the requirements of the EU Directive 2002/95/EC regarding the restriction of certain hazardous substances in electronic equipment. This product does not contain any metals and does not contain any flame-retardants.

**16. OTHER INFORMATION**

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

**Revised Date:** 19 AUGUST 2011

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

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

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