



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

**SAFETY DATA SHEET**

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Identifier:** 80 LIQUID FLUX

**SDS Number:** SDS-HG4133

**Revised Date:** 23 FEBRUARY 2015

**Product Use:** Industrial Use - Flux

**MANUFACTURER:**

**In America:**

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

**EMERGENCY PHONE:**

**CHEMTREC 24 hrs.**  
**USA: 1 (800) 424-9300**  
**Outside USA: +1 (703) 527-3887**

**In Europe:**

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

**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

**In Asia:**

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

## 2. HAZARDS IDENTIFICATION

### PRIMARY ROUTES OF ENTRY:

Eye   
 Inhalation   
 Skin   
 Ingestion   
 NTP   
 Carcinogen listed in IARC   
 OSHA   
 Not Listed

GHS:



Signal Word: Danger

#### Hazard statement(s)

H315 Causes skin irritation  
 H319 Causes serious eye irritation  
 H335 May cause respiratory irritation  
 H360 May damage fertility or the unborn child

#### 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 + P311 IF SWALLOWED: Call POISON CENTER or doctor/physician  
 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)

Classification:

Skin irritation-Category 2  
 Eye irritation-Category 2A  
 Reproductive toxicity-Category 1B  
 Specific target organ toxicity- single exposure-Category 3-respiratory system

### POTENTIAL HEALTH EFFECTS:

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

**Ingestion:** May cause irritation.

**Inhalation:** May be harmful if inhaled. May cause irritation to respiratory tract.

**Skin Contact:** Causes irritation to skin. May be harmful if absorbed through the skin.

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

**Warning:** This product contains a chemical known to the State of California to cause cancer and birth defects (or other reproductive harm). (1- METHYL-2-PYRROLIDONE CAS# 872-50-4)

### 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>
<b>1-METHYL-2-PYRROLIDONE</b>	65-75	872-50-4 (US)	N.E	N.E	N.E.
		(EU)	-	103	309
<b>MINERAL ACID</b>	5-20	10035-10-6(US)	10	N.E.	9.9(ceiling)
		(EU)	-	-	10
		(Canada)	-	-	9.9(ceiling)
		(Singapore)	-	-	9.9
		(Mexico)	-	-	10
<b>WATER</b>	15 - 25	7732-18-5	N.E	N.E	N.E.

Symbol: Xi, T  
N.E. = Not established

Risk Phrases: R36/37/38, R61

**PRODUCT CONTAINS A EU REACH SUBSTANCE OF VERY HIGH CONCERN- 1-METHYL-2-PYRROLIDONE**

### 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:** >200 F                      **Method:** NA
- Auto-ignition Temperature:** ND
- Flammable Limits:** ND
- Extinguishing Media:** Dry chemical, Water or CO<sub>2</sub>. 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. Check with local authority on discharge to any body of water. Product has a low end pH which may be regulated under state or local laws. Wear personal protective equipment. Eliminate sources of ignition. Ventilate area. 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. Wear personal protective equipment as needed. Avoid inhalation of mist or vapors. Take measures to prevent build-up of static charge.

**Storage Precautions:** Store product in tightly capped original containers in a cool, dry and well-ventilated 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. Exhaust ventilation recommended.

### Personal protection:

**Eyes:** Chemical safety glasses/goggles. Splash hazard also requires a face shield.

**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.

**Skin:** Compatible chemical resistant gloves. Use gloves such as nitrile.

**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>	Liquid Amber	<b>Boiling Point:</b>	396°F
<b>Odor:</b>	Mild	<b>Evaporation Rate:</b>	>1
<b>Specific Gravity:</b>	1.100 @ 60° F	<b>pH:</b>	2.15
<b>Vapor Pressure:</b>	>1	<b>Solubility in Water:</b>	Soluble
<b>Vapor Density:</b>	ND	<b>% Volatiles by volume:</b>	100

## 10. STABILITY AND REACTIVITY

**General:** Stable.

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

<b>Incompatible Materials:</b>	Strong alkali
<b>Hazardous Decomposition / Combustion:</b>	Carbon dioxide/carbon monoxide, brominated oxides.
<b>Hazardous Polymerization:</b>	Will not occur.

## 11. TOXICOLOGICAL INFORMATION

<b>Carcinogenicity:</b>	<b>NTP:</b> No		
	<b>OSHA:</b> No		
	<b>IARC:</b> No		
<b>LD50:</b>	Not established.	<b>LC50:</b>	Not established.

Contains an ingredient:

LD50 Oral – rat – 3,914 mg/kg

LD50 – Dermal – rabbit – 8,000 mg/kg

RTECS: UY5790000

Reproductive toxicity- damage to fetus possible

## 12. ECOLOGICAL INFORMATION

Product not tested.

Product contains an ingredient, which is readily 90% biodegradable.

Toxicity to fish: LC50 – other fish – 4,000 mg/l – 96h

LC50 – Leuciscus idus > 500 mg/l – 96h

Toxicity to bacteria: >9,000 mg/l

## 13. DISPOSAL CONSIDERATION

**Waste Disposal Method:** 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 hazardous under shipping requirements.

UN-NONE

## 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.).

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

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

Warning: This product contains a chemical known to the State of California to cause cancer and birth defects (or other reproductive harm). (CAS 872-50-4)

This product has been classified using the Chinese Occupational Exposure Limit for Hazardous Agents in the Workplace, GBZ2-2002.

This product has been classified under the Mexican regulations NOM-018-STPS-2000 and NOM-010-STPS-1999.

SARA 313 Listing - 40 CFR 372.65: None

All ingredients are listed on the EPA TSCA Inventory.

Ingredients are listed on the Canadian Domestic Substance List.

EC Classification, Packaging and Labeling Requirements:

Symbol and Hazard Classification of Product

Xi, T

**Risk Phrases:**

- R36/37/38 Irritating to eyes, respiratory system and skin
- R61 May cause harm to the unborn child ( oxygenated solvent)

**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
- S62 If swallowed, do not induce vomiting seek medical advice immediately and show container or label
- S7 Keep container tightly closed
- S41 In case of fire and/or explosion do not breathe fumes

**16. OTHER INFORMATION**

**HMIS Hazard Rating:**      **Health:**            2  
   **Fire:**                    1  
   **Reactivity:**        0

**Revised Date:**            23 FEBRUARY 2015

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

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

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