



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

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Identifier:** 1081 RED LIQUID FLUX

**SDS Number:** SDS-5609

**Revised Date:** 14 APRIL 2015

**Product Use:** Industrial Use – Water Soluble Solder Flux

#### MANUFACTURER:

##### In America:

The Indium Corporation of America  
 1676 Lincoln Ave., Utica NY 13502  
 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    IARC    OSHA    \*Not Listed

**Carcinogen listed in**

GHS:



Symbol: Warning  
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/Bond container and receiving equipment
- 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)

**POTENTIAL HEALTH EFFECTS:**

- Eye Contact:**    Vapors may be irritating, liquid may damage eye tissue.
- Ingestion:**        May cause irritation. May be harmful.
- Inhalation:**        May cause irritation, headache or dizziness. May be harmful.
- Skin Contact:**    May cause irritation or defatting of the skin with irritation, dryness and cracking.
- Chronic:**            Not established.

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

**WARNING:**            **Applicable to the State of California: This product contains chemicals known to the State of California to cause cancer and/or birth defects (or other reproductive harm).**

### 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>
WATER	10-15	7732-18-5 (US)	N.E.	N.E.	N.E.
PROPRIETARY	20-35	-	N.E.	N.E.	N.E.
CARBOXYLIC ACID	5-10	77-92-9	N.E.	N.E.	N.E.
<b>MIXTURE:</b>					
ETHYL ALCOHOL	50-55	64-17-5(US)	-	1884	-
		(EU)	-	1920	-
and		(Singapore)	1880	-	-
		(Mexico)	-	1900	-
ISOPROPYL ALCOHOL		67-63-0/200-661-7			
		(US)	980	983	1230
		(EU)	N.E.	999	1250
		(Canada)	N.E.	983	1228
		(Singapore)	983	-	1230
		(Mexico)	-	980	1225
		(China)	-	350	700

Symbol: Xn, F  
N.E. = Not established

Risk Phrases: R11, R20/21/22, R68/20/21/22, R36, R67

### 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:** 20C(68F)                      **Method:** TCC
- Auto-ignition Temperature:** Not available
- Flammable Limits:** Upper limit 33. Lower limit 3.3.

**Extinguishing Media:** Use extinguishers appropriate for the surrounding fire conditions: large fires use alcohol resistant foam/water to cool containers/ small fires use dry chemicals/ CO2, water spray or alcohol resistant foam.

**Special Fire Fighting Procedures:** Standard fire - fighting equipment: clothing and SCBA  
Alcohol vapors are heavier than air and may travel a considerable distance to a source of ignition 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, such as gloves and depending on the quantity a respirator with organic cartridges may be required. Clean up by absorption. Eliminate sources of ignition. Keep unnecessary personnel away. Put clean-up materials in a properly labeled metal drum. 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 and dispensing equipment.

**Storage Precautions:** Store product in tightly capped original containers in a cool, dry area away from sources of ignition. 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 is required to keep exposure limits 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 or when working in confined areas. Check area as air-purifying respirator is not fit for oxygen deficient atmospheres.

**Skin:** Compatible chemical resistant gloves (rubber/neoprene/vinyl).

**Other:** Lab coat, eyewash fountain in work area. Avoid the use of contact lenses in high fume 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, RED	<b>Boiling Point:</b>	78°C (173°F)
<b>Odor:</b>	Alcoholic	<b>Melting Point:</b>	Not applicable
<b>Specific Gravity:</b>	0.963 +/- 0.005	<b>pH:</b>	4.98

<b>Vapor Pressure:</b>	40 mm HG @19°C	<b>Solubility in Water:</b>	Miscible
<b>Vapor Density:</b>	1.59	<b>Evaporation Rate:</b>	2.64
<b>Volatile by Volume:</b>	65%		

## 10. STABILITY AND REACTIVITY

<b>General:</b>	Stable.
<b>Conditions to Avoid:</b>	Direct heat, open flames and storage in aluminum.
<b>Incompatible Materials:</b>	phosphorus, halogens, anhydrides, monomers, aldehydes, trichlorides
<b>Hazardous Decomposition / Combustion:</b>	Carbon dioxide/carbon monoxide.
<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.

## 12. ECOLOGICAL INFORMATION

Product not tested. Contains a substance that is harmful to aquatic life.

## 13. DISPOSAL CONSIDERATION

<b>Waste Disposal Method:</b>	Dispose of in accordance with all Federal, State and Local environmental regulations. In Europe follow the Special Waste Regulations. Flammable liquid.
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## 14. TRANSPORT INFORMATION

Transport in accordance with applicable regulations and requirements.

Shipping: UN 1987, Alcohols N.O.S. (ethyl alcohol, isopropanol), 3, PG II

North American Emergency Guide Book – Guide #127



UN 1987 Flammable Liquid

## 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 (CPR).



Canadian WHMIS: Class B Flammable Division 2  
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-0180STPS-2000 and NOM-010-STPS-1999.

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

**WARNING:** This product contains chemicals known to the State of California to cause cancer and/or birth defects (or other reproductive harm).

Trace levels of: Propylene oxide and other chemicals  
Ethyl Alcohol

SARA 313 Listing - 40 CFR 372.65:

Ethyl Alcohol

All ingredients are listed on the EPA TSCA Inventory.

EC Classification, Packaging and Labeling Requirements:

Symbol and Hazard Classification of Product

Xn, F

### Risk Phrases:

R36 Irritating to eyes  
R11 Highly Flammable  
R41 Risk of serious damage to eyes  
R67 Vapors may cause drowsiness and dizziness

### 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  
S27 Take off immediately all contaminated clothing  
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

## 16. OTHER INFORMATION

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

**Revised Date:** 14 APRIL 2015

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

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

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