



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

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Identifier:** LIQUID FLUX 4-OA

**SDS Number:** SDS-IN LF004

**Date:** 1 NOVEMBER 2016

**Product Use:** Industrial Use (mixture) - Liquid flux for soldering applications

### MANUFACTURER:

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## 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):

H226 Flammable liquid and vapor  
 H315 Causes skin irritation  
 H319 Causes serious eye irritation  
 H335 May cause respiratory 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 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)

Classification – isopropyl alcohol

Eye irritant – (Category 2A)

Flammable liquids - (Category 2)

Skin irritation- (Category 3)

Specific target organ systemic toxicity (single exposure) – (Category 3), Central nervous system

### POTENTIAL HEALTH EFFECTS:

**Eye Contact:** Irritating to the eyes and if not removed promptly, may result in serious eye injury. Do not allow material to come in contact with the eyes.

**Ingestion:** May cause irritation.

**Inhalation:** Heated vapor concentrations may be harmful if inhaled, or may cause headache or drowsiness. Maybe irritating to respiratory tract.

**Skin Contact:** May cause skin irritation or dryness.

<b>Chronic:</b>	Not established.
<b>Note:</b>	The Indium Corporation does not recommend, manufacture, market or endorse any of its products for human consumption.
<b>Warning:</b>	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 ethylene oxide).

### 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>
ISOPROPYL ALCOHOL	70-80	67-63-0/200-661-7	980	983	1225
		(EU)	-	999	1250
		(Canada)	-	983	1230
		(Singapore)	983	-	1230
		(Mexico)	-	980	1225
		(China)	-	350	700
PROPRIETARY ADDITIVES	20-30	-	N.E.	N.E.	N.E.

### 4. FIRST AID MEASURES

<b>Eye Contact:</b>	Hold eyelids apart and flush eyes with plenty of tepid water for at least 15 minutes. Seek medical attention if irritation persists.
<b>Ingestion:</b>	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.
<b>Inhalation:</b>	Remove to fresh air. If not breathing, give artificial respiration or oxygen by trained personnel. Seek immediate medical attention.
<b>Skin Contact:</b>	Remove contaminated clothing. Wash affected area with soap and water. Wash clothing before reuse. If irritation persists, obtain medical attention.

### 5. FIRE FIGHTING MEASURES

<b>Flash Point:</b>	23 C (73 F)	<b>Method:</b>	Not available
<b>Auto-ignition Temperature:</b>	Not established.		

<b>Flammable Limits:</b>	Flammable. Limits not established
<b>Extinguishing Media:</b>	Use extinguishers appropriate for the surrounding fire conditions. Foam, dry chemical, water spray.
<b>Special Fire Fighting Procedures:</b>	Firefighters must wear NIOSH approved self-contained breathing apparatus and full protective clothing.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Spill or Leak Procedures:</b>	Wear a respirator and appropriate personal protection (See Exposure Controls/Personal Protective Section). Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Dispose of following all Federal, State and Local regulations. In the EU refer to the Special Waste Regulations. Keep away from sources of ignition. Do not dispose of on the ground or into any waterway.
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## 7. HANDLING AND STORAGE

<b>Handling Precautions:</b>	Keep containers tightly closed when not in use. Use care to avoid spills. Avoid breathing vapors from heated material. Avoid contact with eyes, skin and clothing. Use with adequate ventilation. Ground containers. Keep away from sources of ignition and flame.
<b>Storage Precautions:</b>	Store product in tightly capped original containers in a cool, dry area. Keep away from heat and flame. Store away from incompatible materials. Empty containers may be hazardous as they contain product residue.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Engineering Controls:</b>	Exhaust ventilation should be sufficient to control airborne levels. Use ventilation.
<b>Personal protection:</b>	
<b>Eyes:</b>	Chemical safety glasses with side shields/goggles and face shield may be required under certain situations for splash protection.
<b>Respirator:</b>	An authority approved or compliant marked air-purifying respirator with a fume/organic chemical cartridge is recommended under certain circumstances where airborne concentrations are expected to be elevated.
<b>Skin:</b>	Compatible chemical resistant gloves. Protective outer garment, apron and sleeves as appropriate.
<b>Other:</b>	Eyewash fountain in work area. Avoid the use of contact lenses.
<b>Work/Hygienic Practices:</b>	Maintain good housekeeping. Clean up spills immediately. 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	<b>Boiling Point:</b>	Not established
<b>Odor:</b>	Mild characteristic odor.	<b>Melting Point:</b>	Not applicable
<b>Specific Gravity:</b>	0.875 g/cc	<b>pH:</b>	Not applicable
<b>Vapor Pressure:</b>	Not applicable.	<b>Solubility in Water:</b>	Not established

**Vapor Density:** (air=1) Not applicable.**Flash Point:** 23C (73F)

## 10. STABILITY AND REACTIVITY

**General:** Stable.

**Conditions to Avoid:** High temperatures, open flame.

**Incompatible Materials:** Not established

**Hazardous Decomposition / Combustion:** Not established

**Hazardous Polymerization:** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

**Carcinogenicity:** NTP: No  
OSHA: No  
IARC: No  
\*Liquid Flux 4OA is not considered carcinogenic.

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

**Other:** Contains <0.1% of a substance that is classified as a possible reproductive system/toxin/female development toxin.

## 12. ECOLOGICAL INFORMATION

Product not tested.

## 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. Flammable material. Do not discharge to any drain or waterway.

## 14. TRANSPORT INFORMATION

Transport in accordance with applicable regulations and requirements.

Shipping Name: UN1219, Isopropanol, 3, PG II



North America Emergency Guide Book 2012 – Guide #129

## 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.).

California Prop 65, Safe Drinking Water Standards: Warning: This product contains a chemical(s) known to the State of California to cause cancer and/or birth defects (other reproductive harm). (Trace levels of Ethylene Oxide).

SARA 313 Listing - 40 CFR 372.65 - CAS# 75-21-8 (Ethylene Oxide), CAS # 123-91-1  
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 under the Mexican regulations NOM-018-STPS-2015 and NOM-010-STPS-2014.

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).

### 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.

### In Japan:

Poisonous and Deleterious Substance Control Law: Deleterious contains trace levels of ethylene oxide (75-21-8)- not intentionally added.

Specified Poisonous Substances – None

Chemical Substance Control Law (CSCL) Class 2 – None

PRTR substance list – Class I -ethylene oxide trace mounts not intentionally added

Fire Service Law (FSL)- product contains isopropanol a flammable liquid.

**16. OTHER INFORMATION**

**HMIS Hazard Rating:**      **Health:**            2  
   **Fire:**                    3  
   **Reactivity:**        0

**Revised Date:**            1 NOVEMBER 2016

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

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

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