1. PRODUCT AND COMPANY IDENTIFICATION

**Product Identifier:** FP1095-NF

**SDS Number:** SDS-5816  
**Revised Date:** 8 OCTOBER 2013

**Product Use:** Industrial use – mixture - (liquid flux)

**MANUFACTURER:**

**In America:**
The Indium Corporation of America  
1676 Lincoln Ave., Utica NY 13502  
Information: (315) 853-4900

nswarts@indium.com

Chicago Materials Division  
80 Scott St.  
Elk Grove Village, Illinois 60004  
Information: (847) 439-9135

**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

**EMERGENCY PHONE:**
CHEMTREC 24 hrs.  
USA: 1 (800) 424-9300  
Outside USA: +1 (703) 527-3887
2. **HAZARDS IDENTIFICATION**

**PRIMARY ROUTES OF ENTRY:**

<table>
<thead>
<tr>
<th>Route</th>
<th>Carcinogen listed in</th>
</tr>
</thead>
<tbody>
<tr>
<td>⊗Eye</td>
<td>⊗Inhalation</td>
</tr>
</tbody>
</table>

GHS:

![GHS Symbols]

Signal Word: Danger

**Hazard statement(s)**

- H225 Highly flammable liquid and vapor
- H319 Causes serious eye irritation
- H335 May cause respiratory irritation
- H336 May cause drowsiness or dizziness
- H412 Harmful to aquatic life with long lasting effects

**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

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

**POTENTIAL HEALTH EFFECTS:**

- **Eye Contact:** Vapors may be irritating, liquid may damage eye tissue.
- **Ingestion:** May result in gastric disturbances.
- **Inhalation:** May cause throat irritation, headache and nausea.
- **Skin Contact:** May cause irritation.
Chronic: 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 chemicals known to the State of California to cause cancer and/or birth defects (or other reproductive harm). (trace levels of contaminants not intentionally added)

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>% wt</th>
<th>CAS Registry #</th>
<th>PEL mg/m³</th>
<th>TLV-TWA mg/m³</th>
<th>TLV-STEL mg/m³</th>
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<tbody>
<tr>
<td>ISOPROPANOL</td>
<td>75-85</td>
<td>67-63-0 (US)</td>
<td>980</td>
<td>983</td>
<td>1230</td>
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<tr>
<td></td>
<td></td>
<td>(EU) N.E.</td>
<td>999</td>
<td>1250</td>
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<td>(Canada) N.E.</td>
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<td>1228</td>
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<td>(Singapore) 983</td>
<td>-</td>
<td>1230</td>
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<td>(China) -</td>
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<td>700</td>
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<td>-</td>
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<tr>
<td>SURFACTANT</td>
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<td>9003-11-6</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
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</table>

Symbol: XI, F Risk Phrases: R36/37/38, R11
N.E. = Not established

PRODUCT DOES NOT CONTAIN EU REACH 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: 54 F(12C) Method: Closed Cup
Auto-ignition Temperature: None
Flammable Limits: Upper: 12 Lower: 2
Extinguishing Media: Use extinguishers appropriate for the surrounding fire conditions (water/dry chemical).
Special Fire Fighting: Wear standard fire fighting equipment.

6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Do not allow chemical material to enter sewer system or waterway. Eliminate sources of ignition. Contain spill and absorb if possible. Wear personal protective equipment. Dispose of following all Federal, State and Local 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.

Storage Precautions: Store product in tightly capped original containers in a cool, dry and ventilated area. Refer to product label for specific storage temperature requirements. Rotate stock to ensure use before expiration date on the label. Store away from sources of ignition.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Face velocity >2.1 cubic feet/minute in confined areas. Ventilation should be sufficient to reduce exposure to below exposure levels.

Personal Protection:
Eyes: Chemical safety glasses/splash goggles/face shield.
Respirator: A NIOSH approved or EU compliant CE 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 for isopropanol, (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

Appearance: Liquid, light yellow
Odor: Alcoholic odor.
Specific Gravity: 0.838 @ 77F
Boiling Point: (180°F)
Vapor Pressure: 31 mm HG @25°C
Melting Point: Not applicable
pH: 6.5 (as is) 7.0 (1% solution)
Vapor Density: >1
Solubility in Water: Soluble
### 10. STABILITY AND REACTIVITY

**General:** Stable.

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

**Incompatible Materials:** Strong alkali, halogens, phosphorus, monomers, aldehydes & trichlorides

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

**Hazardous Polymerization:** Will not occur.

### 11. TOXICOLOGICAL INFORMATION

**Carcinogenicity:**
- NTP: No
- OSHA: No
- IARC: No

**LD50:** Not established.

**LC50:** Not established.

RTECS: Isopropyl alcohol NT8050000

- 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

### 12. ECOLOGICAL INFORMATION

This section is subject to future development.

**Biodegradability:** Data not established on product.

**Aquatic Toxicity:** Data not established on product

Product contain a chemical ingredient that is toxic to aquatic environment. May cause long term adverse effects in the aquatic environment.

- Isopropyl alcohol – 4396 mg/kg (rat) LD50 oral/ 12800 mg/kg (rat) LD50 dermal/ 72.6 mg/l (rat) 4h LC50 inhalation

### 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. Contains 3% of an ingredient that is harmful to the environment. Product is flammable and generally is disposed of as hazardous waste.
14. TRANSPORT INFORMATION

Transport in accordance with applicable regulations and requirements.

Shipping Name: UN1219, Isopropanol, 3, PG II
Marine Pollutant: No

Shipping small quantities: Ground ONLY

40 CFR 173.150 - Exceptions for Class 3 (Flammable Liquids). Limited quantities of flammable liquids, Class 3, are excepted from labeling requirements for ground shipment only. For Packing Group II, inner packaging not over 5.0L (1.3 gallons) net capacity each, packed in a strong outer packaging.

40 CFR 172.203 – Limited quantities- when a shipping paper is required the description for a material offered for transportation as “limited quantity” must include the words “Limited Quantity” following the basic description.

Shipping: UN 1219, Isopropanol, 3, PG II (Limited Quantity) (mixture)
Review 40 CFR for clarification and further information.

Shipping via aircraft requires compliance with the regulations and not under exceptions.

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 Mexican Standards NOM-018-STPS-2000 and NOM-010-STPS-1999.

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 using the Chinese Occupational Exposure Limit for Hazardous Agents in the Workplace, GBZ2-2002.

WARNING (Applicable in 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). Safe Drinking Water Standard.
Trace levels not intentionally added: ethylene oxide, propylene oxide, 1,4 dioxane

SARA 313 Listing - 40 CFR 372.65: Trace levels of ethylene oxide, propylene oxide, 1,4 dioxane

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, F

Risk Phrases:
R36/37/38 Irritating to eyes, respiratory system and skin
R11 Flammable
R67 Vapors may cause drowsiness and dizziness

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
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
S61 Avoid release to the environment
S62 If swallowed, do not induce vomiting seek medical advice immediately and show container or label
S7 Keep container tightly closed

INDUSTRIAL USE ONLY
16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>HMIS Hazard Rating:</th>
<th>Health:</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fire:</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Reactivity:</td>
<td>0</td>
</tr>
</tbody>
</table>

Revised Date: 18 SEPTEMBER 2013  
Prepared by: Nancy Swarts, Indium Corporation of America  
Approved by: Nancy Swarts, Indium Corporation of America

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