1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: LIQUID FLUX 5R
SDS Number: SDS-IN LF-009
Revised Date: 25 JANUARY 2015

Product Use: Industrial Use - Liquid flux

MANUFACTURER:

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

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

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

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

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
2. HAZARDS IDENTIFICATION

GHS

Signal Word: Danger

Hazard statement(s)
H225  Highly flammable liquid and vapor
H317  May cause an allergic skin reaction
H319  Causes eye irritation
H334  May cause allergy or asthma symptoms or breathing difficulties if inhaled
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
P240  Ground/Bond container and receiving equipment
P242  Use only non-sparking tools
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:
Flammable Liquid – Category 2
Eye irritation – Category 2A
Skin sensitization- Category 1B
Respiratory sensitization- Category 1B
Specific target organ toxicity- single exposure – Category 3- central nervous system

PRIMARY ROUTES OF ENTRY:
⊗ Eye  ⊗ Inhalation  ⊗ Skin  ⊗ Ingestion  NTP  IARC  OSHA  ⊗ Not Listed

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 and damage to the mouth, esophagus and gastrointestinal
tract.

**Inhalation:** Heated vapor concentrations may be harmful if inhaled. Irritating to respiratory tract. May cause headache or lightheadedness. Rosin may cause occupational asthma.

**Skin Contact:** May cause skin irritation. Allergic reactions are possible, especially with repeated or prolonged exposure.

**Chronic:** 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

<table>
<thead>
<tr>
<th>Components</th>
<th>% wt</th>
<th>CAS Registry #</th>
<th>PEL</th>
<th>TLV-TWA</th>
<th>TLV-STELE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>mg/m³</td>
<td>mg/m³</td>
<td>mg/m³</td>
</tr>
<tr>
<td>ROSIN</td>
<td>50-60</td>
<td>65997-05-9</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(EU) 0.05</td>
<td>N.E.</td>
<td>0.15</td>
<td></td>
</tr>
<tr>
<td>ISOPROPYL ALCOHOL</td>
<td>40-50</td>
<td>67-63-0</td>
<td>980</td>
<td>983</td>
<td>1230</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(EU) -</td>
<td>999</td>
<td>1250</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Canada) -</td>
<td>983</td>
<td>1228</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Mexico) -</td>
<td>980</td>
<td>1225</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Singapore) -</td>
<td>983</td>
<td>-</td>
<td>1230</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(China) -</td>
<td>350</td>
<td>700</td>
<td></td>
</tr>
</tbody>
</table>

**Symbol:** XI, F  
**Risk Phrases:** R36/37/38, R11, R42/43  
**N.E. = Not established**  
**EU = European Union Occupational Exposure Limits**

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

### 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:** 11 C (52 F)  
**Method:** Not available  
**Auto-ignition Temperature:** Not established.
6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Wear a respirator and appropriate Personal Protective (See Exposure Controls/Personal Protective Section). Size of spill shall determine respiratory protection from air purifying to self-contained breathing apparatus. Keep unnecessary and unprotected personnel from entering the spill area. 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.

7. HANDLING AND STORAGE

Handling Precautions: 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.

Storage Precautions: 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

Engineering Controls: Exhaust point source ventilation should be sufficient to control airborne levels. Use ventilation.

Personal protection:

Eyes: Chemical safety glasses/ splash goggles. Face shield for splash hazards.

Respirator: 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.

Skin: Compatible chemical resistant gloves. Protective outer garment, apron or sleeves as appropriate and face shield.

Other: Eyewash fountain in work area. Avoid the use of contact lenses.

Work/Hygienic Practices: 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

Appearance: Liquid
Odor: Slight characteristic odor.
Specific Gravity: 0.9291
Boiling Point: 84 C (183 F)
Melting Point: Not applicable
pH: Not applicable
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
LD50: Not established. LC50: Not established.
Other: None known

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 waste.

14. TRANSPORT INFORMATION

Transport in accordance with applicable regulations and requirements.

UN 1219, Isopropanol, 3, PG II


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 Division 2 Flammable, D2B Toxic Material Causing Other Toxic Effects (eye irritation in animals). D2B Materials Causing Other Toxic Effects –irritant.

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 the Mexican regulations, NOM-018-STPS-2000 and NOM-010-STPS-1999.

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 the Mexican regulations, NOM-018-STPS-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.

SARA 313 Listing - 40 CFR 372.65 - None
All ingredients are listed on the USEPA TSCA Inventory.
All ingredients are listed on the Philippines Inventory of Chemicals.
All ingredients are listed on the Korean Existing Chemical 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 Highly Flammable
R42/43 May cause sensitization by inhalation and skin contact
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/gas/vapor/spray
S24/25 Avoid contact with skin and eyes
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

<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>Physical Hazard:</td>
<td>0</td>
</tr>
</tbody>
</table>

**Revised Date:** 25 JANUARY 2015  
**Prepared by:** Nancy Swarts, Indium Corporation of America  
**Approved by:** Nancy Swarts, Indium Corporation of America

The information and recommendations contained herein are, to the best of The Indium Corporation of America’s knowledge and belief, accurate and reliable as of the date issued. The Indium Corporation of America does not warrant or guarantee their accuracy or reliability, and The Indium Corporation of America shall not be liable for any loss or damage arising out of the user thereof. The information and recommendations are offered for the user's consideration and examination, and it is the user's responsibility to satisfy itself that they are suitable and complete for its particular use. If buyer repackages this product, legal counsel should be consulted to insure proper health, safety and other necessary information is included on the container.