SAFETY DATA SHEET

User must review the contents of this (SDS) and determine what is applicable to their own country laws under Health and Safety and apply them as necessary. This (SDS) will not reference every countries Health and Safety Laws. It is the user’s responsibility to determine what is applicable to them, including but not limited to review of any specific chemical lists and apply the requirements as necessary.

1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product Identifier:</th>
<th>K115</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDS Number:</td>
<td>SDS-LF017</td>
</tr>
<tr>
<td>Revised Date:</td>
<td>26 JULY 2018</td>
</tr>
<tr>
<td>Product Use:</td>
<td>Industrial Use - Liquid flux</td>
</tr>
</tbody>
</table>

MANUFACTURER:

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

In Europe:
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Kingston, Milton Keynes, UK, MK 10 OAG
Information: +44 [0] 1908 580400

In Asia:
The 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

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

GHS:

Signal Word: Warning

Hazard statement(s)
H317  May cause an allergic skin reaction
H319  Causes serious eye irritation
H334  May cause allergy or asthma symptoms or breathing difficulties if inhaled
EUH208  Contains rosin. May produce an allergic reaction

Precautionary statement(s)
P233  Keep container tightly closed
P261  Avoid breathing dust/fume/gas/mist/vapours/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 + P341  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:
Skin irritation- Category 2
Respiratory sensitizer-Category 1B
Eye irritation-Category 2A

POTENTIAL HEALTH EFFECTS:

Eye Contact: Causes irritation to the eyes.
Ingestion: May cause irritation
Inhalation: Heated vapor concentrations may be harmful if inhaled. May cause irritation to the respiratory tract.
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 mg/m³</th>
<th>TLV-TWA mg/m³</th>
<th>TLV-STEL mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALCOHOL</td>
<td>50</td>
<td>98-55-5</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>ROSIN</td>
<td>50</td>
<td>65997-05-9 (US)</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(EU)</td>
<td>0.05</td>
<td>N.E.</td>
<td>0.15</td>
</tr>
</tbody>
</table>

N.E. = Not established  
EU = European Union Occupational Exposure Limits

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:** >93°C (200°F)  
**Method:** Not available

**Auto-ignition Temperature:** Not established

**Flammable Limits:** Not established

**Extinguishing Media:** Use extinguishers appropriate for the surrounding fire conditions. Foam, CO2 (carbon dioxide) and dry chemical. Water may not be effective.

**Special Fire Fighting Procedures:** Firefighters must wear NIOSH approved self-contained breathing apparatus and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

**Spill or Leak Procedures:** Wear a respirator and appropriate personal protection (See Exposure Controls/Personal Protective Section). Keep non-emergency personnel from 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.

**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: Good exhaust ventilation should be sufficient to control airborne levels. Local exhaust may be necessary for some operations.

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

Respirator: A NIOSH approved or EU compliant CE marked air-purifying respirator with a fume/organic chemical cartridge is recommended under certain circumstances where airborne concentrations are expected to be elevated. Most conditions do not require respiratory protection.

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

Other: Eyewash 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.

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not established</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild characteristic odor.</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>Not established</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not established (Air = 1)</td>
</tr>
<tr>
<td>pH</td>
<td>Not established</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not established</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>No</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>Not established</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

General: Stable.

Conditions to Avoid: Heat/High Temperatures

Incompatible Materials: Excessive heat

Hazardous Decomposition / Combustion: Carbon monoxide/carbon dioxide

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

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

LD50: Not established
LC50: Not established.

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. Do not dump into any sewers, on the ground or into any body of water.

14. TRANSPORT INFORMATION
   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 (CPR).
   This product has been classified in accordance with the Mexican guidelines, NOM-018-STPS-2015 and NOM-010-STPS-2014
   This product has been classified in accordance with the guidelines set, by the Dept of Industrial Health of the Republic of Singapore.

   In China:
   This product has been classified using the Chinese Occupational Limit for Hazardous Agents in the Workplace, GBZ2-2007.
   Decree No. 591: Regulations on the Control over Safety of Hazardous Chemicals
   GB 30000.2-29-2013, Rules for classification and labeling of chemicals. (GHS)
   GB/T 16483-2008, GB/T 17517-2013
   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).
   SARA 313 Listing - 40 CFR 372.65 - None
   All ingredients are listed on the EPA TSCA Inventory.

16. OTHER INFORMATION
   HMIS Hazard Rating:  
   Health: 1
   Fire: 1
   Reactivity: 0
   Revised Date: 26 JULY 2018
   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.