SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: TACFLUX 018
SDS Number: SDS-IN TF018
Revised Date: 8 NOVEMBER 2018
Product Use: Industrial Use - Tacflux

MANUFACTURER:

In America:
The Indium Corporation of America®,
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nswarts@indium.com

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In China: Emergency 86+ 4008417580

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Information: +44 [0] 1908 580400

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Suzhou Industrial Park
Suchun Industrial Square
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In Asia:
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Asia-Pacific Operations-Singapore
29 Kian Teck Avenue
Singapore 628908
Information: +65 6268-8678

http://www.indium.com
2. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY:

- Eye
- Inhalation
- Skin
- Ingestion

Carcinogen listed in:

- NTP
- IARC
- OSHA
- Not Listed

GHS:

Signal Word: Warning

Hazard statement(s)

H317  May cause an allergic skin reaction
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/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)

Classification:

Skin sensitizer- Category 1B
Respiratory sensitizer- Category 1B

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. Irritating to the respiratory tract. 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 product's for human consumption.
3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>% wt</th>
<th>CAS Registry #/EINECS</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>ROSIN</td>
<td>30-40</td>
<td>65997-05-9/ NLP No. 500-163-2</td>
<td>N.E.</td>
<td>N.E.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(EU) 0.05</td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>0.15 (sensitiser)</td>
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<tr>
<td>POLYGLYCOL ETHER</td>
<td>30-40</td>
<td>9038-95-3</td>
<td>N.E.</td>
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<tr>
<td>PROPRIETARY</td>
<td>20-40</td>
<td>-</td>
<td>N.E.</td>
<td>N.E.</td>
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</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:** Not established.  **Method:** Not established.

**Auto-ignition Temperature:** Not established.

**Flammable Limits:** Limits not established, not flammable.

**Extinguishing Media:** Use extinguishers appropriate for the surrounding fire conditions.

**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). 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
8. **EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Engineering Controls:** Good general exhaust or point source ventilation should be sufficient to control airborne levels and keep exposures as low as possible.

**Personal protection:**

- **Eyes:** Chemical safety glasses/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 and sleeves as appropriate.
- **Other:** 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.

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:** Flux
- **Odor:** Mild characteristic odor.
- **Specific Gravity:** Not applicable.
- **Vapor Pressure:** Not applicable.
- **Vapor Density:** (air=1) Not applicable.
- **Boiling Point:** Not applicable.
- **Melting Point:** Not applicable
- **pH:** Not applicable
- **Solubility in Water:** Insoluble

10. **STABILITY AND REACTIVITY**

- **General:** Stable.
- **Conditions to Avoid:** Freezing temperatures. High temperatures.
- **Incompatible Materials:** Not established
- **Hazardous Decomposition / Combustion:** Harmful organic fumes and toxic oxide fumes may form at elevated temperatures.
- **Hazardous Polymerization:** Will not occur.

11. **TOXICOLOGICAL INFORMATION**

- **Carcinogenicity:**
  - NTP: No
  - OSHA: No
  - IARC: No
- **LD50:** Not established.
- **LC50:** Not established.
- **Other:** None known. Prolonged or repeated exposure to rosin flux fume may cause workers to develop occupational asthma.
12. ECOLOGICAL INFORMATION

Product not tested.
Contains substances that are harmful to the aquatic environment with long lasting effects.

13. DISPOSAL CONSIDERATION

Waste Disposal Method: Dispose of in accordance with all Federal, State and Local environmental regulations.
In Europe follow the waste assessment rules.

14. TRANSPORT INFORMATION

Transport in accordance with applicable international regulations and requirements. Not regulated under US DOT (United States Department of Transportation). Non-hazardous under shipping modes and regulations.

IATA none
UN - none
North American Emergency Guide Book – Does not meet the criteria as hazardous
Marine Pollutant: No

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.).

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).
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 hazard criteria of the Canadian Controlled Products Regulation (CPR).
This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.
Canadian WHMIS: D2B Toxic Material Causing Other Toxic Effects (skin irritant/skin sensitizer).
This product has been classified in accordance with the guidelines set by the Dept of Industrial Health of the Republic of Singapore.

SARA 313 Listing - 40 CFR 372.65 - None
All ingredients are listed on the EPA TSCA Inventory.

16. OTHER INFORMATION

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<tr>
<th>HMIS Hazard Rating:</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Fire:</td>
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<tr>
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<td>Reactivity:</td>
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</table>

Revised Date: 8 NOVEMBER 2018
Prepared by: Nancy Swarts, Indium Corporation of America
Approved by: Nancy Swarts, Indium Corporation of America

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