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

Product Identifier: TACFLUX032HF-UV
SDS Number: SDS-5948
Revised Date: 22 JUNE 2018

Product Use: Industrial use - Flux

MANUFACTURER:

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

In Europe:
The Indium Corporation of America® (European Operations)
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

PRIMARY ROUTES OF ENTRY:

<table>
<thead>
<tr>
<th></th>
<th>Carcinogen listed in</th>
</tr>
</thead>
<tbody>
<tr>
<td>☒ Eye</td>
<td>NTP</td>
</tr>
<tr>
<td>☒ Inhalation</td>
<td>IARC</td>
</tr>
<tr>
<td>☒ Skin</td>
<td>OSHA</td>
</tr>
<tr>
<td>☒ Ingestion</td>
<td>☒ Not Listed</td>
</tr>
</tbody>
</table>

GHS:

![Warning Symbol]

Signal Word: Warning

**Hazard statement(s)**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H317</td>
<td>May cause allergic skin reaction</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
</tbody>
</table>

**Precautionary statement(s)**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P233</td>
<td>Keep container tightly closed</td>
</tr>
<tr>
<td>P261</td>
<td>Avoid breathing dust/fume/gas/mist/vapors/spray</td>
</tr>
<tr>
<td>P270</td>
<td>Do not eat, drink or smoke when using this product</td>
</tr>
<tr>
<td>P273</td>
<td>Avoid release to the environment</td>
</tr>
<tr>
<td>P280</td>
<td>Wear protective gloves/protective clothing/eye protection/face protection</td>
</tr>
<tr>
<td>P362</td>
<td>Take off contaminated clothing and wash before reuse</td>
</tr>
<tr>
<td>P314</td>
<td>IF SWALLOWED: Get Medical advice/attention if you feel unwell</td>
</tr>
<tr>
<td>P352</td>
<td>IF ON SKIN: Wash with plenty of soap and water</td>
</tr>
<tr>
<td>P341</td>
<td>IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing</td>
</tr>
<tr>
<td>P305</td>
<td>IF IN EYES: Rinse continuously with water for several minutes (15 mins)</td>
</tr>
</tbody>
</table>

**Classification:**

Eye irritant (Category 2A)

Specific target organ-single exposure (Category 3) respiratory system

**POTENTIAL HEALTH EFFECTS:**

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

**Ingestion:** May be harmful if swallowed. May cause irritation.

**Inhalation:** Heated vapor concentrations may irritation or harm to respiratory tract.

**Skin Contact:** May cause skin irritation or allergic reaction.

**Chronic:** Not established.

**NOTE:** The Indium Corporation does not recommend, manufacture, market or endorse any of it's product's for human consumption.

**WARNING:** This product can expose you to chemicals including [trace amounts of propylene oxide] which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)
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>POLYGLYCOL ETHER</td>
<td>50-60</td>
<td>67700-97-4</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>ORGANIC ACIDS</td>
<td>25-30</td>
<td>68937-72-4</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>ETHANOLAMINE</td>
<td>10-25</td>
<td></td>
<td>N.E.</td>
<td>5</td>
<td>N.E.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Singapore)</td>
<td>5</td>
<td>-</td>
<td>-</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: 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. Ensure area is properly vented. 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 general exhaust ventilation should be sufficient to control airborne levels and keep exposures to as low as possible.

Personal protection:

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

Respirator: An 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. Protective skin from direct exposure. Latex gloves not recommended.

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

Appearance: Flux-yellow

Boiling Point: Not established

Odor: Mild characteristic odor.

Melting Point: Not established

Specific Gravity: 1 g/cc

pH: 4 - 8

Vapor Pressure: Not established

Solubility in Water: Insoluble

Vapor Density: (air=1) Not applicable.

10. STABILITY AND REACTIVITY

General: Stable.

Conditions to Avoid: Freezing temperatures. High temperatures.

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: Prolonged or repeated exposure to rosin flux fume may cause workers to develop occupational asthma. None of the ingredients including proprietary are listed as a carcinogen.

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.

14. TRANSPORT INFORMATION

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

UN – none

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.).

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation (CPR).

Canadian WHMIS: 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.

**WARNING:** This product can expose you to chemicals including [trace amounts of propylene oxide] which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

SARA 313 Listing (TRI Reporting) - 40 CFR 372.65 - Proprietary polyglycol ether 12%

All ingredients are listed on the EPA TSCA Inventory.

This product has been classified in accordance with the Mexican guidelines, NOM-018-STPS-2015 and NOM-010-STPS-2014.

**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).
### 16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>HMIS Hazard Rating:</th>
<th>Health:</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire:</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Reactivity:</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

**Revised Date:** 22 JUNE 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.