1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: 16-3519 FLUX THINNER
SDS Number: SDS-4090
Product Use: INDUSTRIAL USE -THINNER
Revised Date: 8 DECEMBER 2014

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. 428
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
H319  Causes serious eye irritation
H336  May cause drowsiness or dizziness

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
P241  Use explosion-proof electrical/ventilating/lightening/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
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
Specific target organ toxicity- single exposure – Category 3- central nervous system

PRIMARY ROUTES OF ENTRY:

Carcinogen listed in

<table>
<thead>
<tr>
<th></th>
<th>Carcinogen listed in</th>
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<tbody>
<tr>
<td></td>
<td>xEye</td>
</tr>
<tr>
<td></td>
<td>xInhalation</td>
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<tr>
<td></td>
<td>xSkin</td>
</tr>
<tr>
<td></td>
<td>xIngestion</td>
</tr>
<tr>
<td></td>
<td>NTP</td>
</tr>
<tr>
<td></td>
<td>IARC</td>
</tr>
<tr>
<td></td>
<td>OSHA</td>
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<tr>
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<td>xNot Listed</td>
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POTENTIAL HEALTH EFFECTS:

Eye Contact:  Vapors may be irritating, liquid may damage eye tissue.

Ingestion:    May cause persistent nausea, vomiting and abdominal pain.

Inhalation:   Vapor may cause headaches and or dizziness. Rosin may cause occupational asthma.

Skin Contact: Prolonged contact may cause irritation and dermatitis.

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>ISOPROPANOL</td>
<td>85-90</td>
<td>67-63-0 (US)</td>
<td>980</td>
<td>983</td>
<td>1225</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(EU) -</td>
<td>-</td>
<td>999</td>
<td>1250</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Canada) -</td>
<td>-</td>
<td>983</td>
<td>1228</td>
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<tr>
<td></td>
<td></td>
<td>(Singapore) -</td>
<td>983</td>
<td>-</td>
<td>1230</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Mexico) -</td>
<td>-</td>
<td>980</td>
<td>1225</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(China) -</td>
<td>-</td>
<td>350</td>
<td>700</td>
</tr>
<tr>
<td>PROPAN-2-OL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROSIN</td>
<td>&lt;5</td>
<td>8050-09-7 (EU)</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>TERPENE ALCOHOL</td>
<td>5-10</td>
<td>-</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
</tbody>
</table>

Symbol: Xi, F  Risk Phrases: R36/37/38, R11
N.E. = Not established  EU = European 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:** 54 F (12C)  **Method:** Closed Cup

**Auto-ignition Temperature:** N/A

**Flammable Limits:** Upper: 12 ; Lower 2

**Extinguishing Media:** Dry chemical, Water or CO₂. Use extinguishers appropriate for the surrounding fire conditions.

**Special Fire Fighting Procedures:** Wear protective clothing and self - contained breathing apparatus. Use water to cool fire exposed containers. Flammable vapors may travel great distances to ignition source and flash back.
6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: DO NOT allow material to enter sewer system or waterway. Wear personal protective equipment. Eliminate sources of ignition. Ventilate area in accordance with regulations. 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. Wear personal protective equipment.

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

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Face velocity >2.1 cubic feet/minute in confined areas. Exhaust ventilation recommended.

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 where airborne concentrations are expected to be elevated.

Skin: Compatible chemical resistant gloves. Use gloves such as nitrile, which are compatible with alcohol's.

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance:</td>
<td>Clear</td>
</tr>
<tr>
<td>Odor:</td>
<td>Alcohol odor.</td>
</tr>
<tr>
<td>Specific Gravity:</td>
<td>0.792</td>
</tr>
<tr>
<td>Vapor Pressure:</td>
<td>44 mm HG @ 25 C</td>
</tr>
<tr>
<td>Vapor Density:</td>
<td>2.95 (air=1)</td>
</tr>
<tr>
<td>Boiling Point:</td>
<td>182 F</td>
</tr>
<tr>
<td>Evaporation Rate:</td>
<td>Not available</td>
</tr>
<tr>
<td>pH:</td>
<td>3.8</td>
</tr>
<tr>
<td>Solubility in Water:</td>
<td>Slightly</td>
</tr>
<tr>
<td>% Volatiles by volume:</td>
<td>90%</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

General: Stable.

Conditions to Avoid: Direct heat, open flames and storage in aluminum.
Incompatible Materials: Anhydrides, halogens, phosphorus, trichlorides, monomers, aldehydes
Hazardous Decomposition / Combustion: Carbon dioxide/carbon monoxide.
Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity: National Toxicity Program NTP: No
Occupational Safety & Health Administration OSHA: No
International Agency for Research on Cancer IARC: No
LD50: Not established. LC50: Not established.

IPA: NIOSH RTECS – NT8050000
Oral rat LD50 - 4396 mg/kg
Dermal rat LD50 – 12800 mg/kg
Dermal rabbit – 12870 mg/kg
Inhalation rat – 72.6 mg/l 4 h

12. ECOLOGICAL INFORMATION

Product not tested.
IPA: Freshwater Algae – 1000 mg/l EC50 >72h
Freshwater Fish – 1400000 ug/l LC50 96h
Water Flea – 13299 mg/l EC50 48 h

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 regulations and requirements.
UN1219, Isopropanol, 3, PG II (mixture)

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 B2 Flammable Liquid

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.

This product has been classified under 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.

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
   R 11 Highly 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
   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
   S62 If swallowed, do not induce vomiting seek medical advice immediately and show container or label
   S7 Keep container tightly closed
16. OTHER INFORMATION

HMIS Hazard Rating:  
- Health: 2
- Fire: 3
- Reactivity: 0

Revised Date: 8 DECEMBER 2014
Prepared by: Nancy Swarts, Indium Corporation of America
Approved by: Nancy Swarts, Indium Corporation of America

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