1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: 3559 ROSIN FLUX
SDS Number: SDS-4426
Revised Date: 5 JULY 2018
Product Use: INDUSTRIAL USE - ROSIN FLUX

MANUFACTURER:

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

Indium Corporation of America
Chicago Material Division
80 Scott St.
Elk Grove Village, Illinois 60007
Information: (847) 439-9135

In Europe:
Indium Corporation of Europe (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:

- Eye
- Inhalation
- Skin
- Ingestion

Carcinogen listed in

- NTP
- IARC
- OSHA
- Not Listed

GHS:

Signal word: Danger

Hazard statement (s):

H225  Highly flammable liquid and vapor
H317  May cause an allergic skin reaction
H320  Causes eye irritation
H334  May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335  May cause respiratory irritation

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
P301 + P314 IF SWALLOWED: Get Medical advice/attention if you feel unwell
P302 + P341 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
- Skin sensitizer- Category 1B
- Respiratory sensitizer- Category 1B

POTENTIAL HEALTH EFFECTS:

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

Ingestion:  May cause irritation. May be harmful.

Inhalation:  May cause throat irritation, headache or dizziness. May be harmful if inhaled. Rosin may cause occupational asthma.

Skin Contact:  Prolonged contact causes irritation or dermatitis. May be harmful if absorbed through the skin.

Chronic:  Not established.

Target Organ:  Nerves, liver, heart
NOTE: The Indium Corporation does not recommend, manufacture, market or endorse any of its products for human consumption.

WARNING: This product can expose you to chemicals including [ethyl alcohol] which is known to the State of California to cause cancer. For more information go to 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>ETHYL ALCOHOL</td>
<td>70-80</td>
<td>64-17-5 (US)</td>
<td>1900</td>
<td>1884</td>
<td>1230</td>
</tr>
<tr>
<td>(Ethanol)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(EU)</td>
<td></td>
<td></td>
<td></td>
<td>1920</td>
<td>-</td>
</tr>
<tr>
<td>(Canada)</td>
<td></td>
<td></td>
<td></td>
<td>1884</td>
<td>2355</td>
</tr>
<tr>
<td>(Singapore)</td>
<td></td>
<td></td>
<td></td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>(Mexico)</td>
<td></td>
<td></td>
<td></td>
<td>1900</td>
<td>-</td>
</tr>
<tr>
<td>ISOPROPYL ALCOHOL</td>
<td>5-15</td>
<td>67-63-0</td>
<td></td>
<td>980</td>
<td>983</td>
</tr>
<tr>
<td>(EU)</td>
<td></td>
<td></td>
<td></td>
<td>999</td>
<td>1250</td>
</tr>
<tr>
<td>(Canada)</td>
<td></td>
<td></td>
<td></td>
<td>983</td>
<td>1228</td>
</tr>
<tr>
<td>(Singapore)</td>
<td></td>
<td></td>
<td></td>
<td>983</td>
<td>1230</td>
</tr>
<tr>
<td>(China)</td>
<td></td>
<td></td>
<td></td>
<td>980</td>
<td>1225</td>
</tr>
<tr>
<td>(Mexico)</td>
<td></td>
<td></td>
<td></td>
<td>350</td>
<td>700</td>
</tr>
<tr>
<td>ROSIN</td>
<td>10-15</td>
<td>8050-09-7</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>PROPRIETARY</td>
<td>5-10</td>
<td>-</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
</tbody>
</table>

N.E. = Not established

### 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: 65F  
Method: TCC

Auto-ignition Temperature: 793F

Flammable Limits: Lower limit 4.3

Extinguishing Media: Use extinguishers appropriate for the surrounding fire conditions. Water/CO2/Dry Chemical

Special Fire Fighting Procedures: Standard fire fighting equipment

6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Do not allow material to enter sewer system or waterway. Wear personal protective equipment, such as gloves and depending on the quantity a respirator with organic cartridges may be required. Clean up by absorption. Eliminate sources of ignition. Keep unnecessary personnel away. Put clean-up materials in a properly labeled metal drum. Dispose of following all Federal, State and Local regulations. In the EU refer to the Special Waste Regulations.

7. HANDLING AND STORAGE

Handling: 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 away from sources of ignition. 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 is recommended to keep exposure limits 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 where airborne concentrations are expected to be elevated.

Skin: Compatible chemical (alcohol) resistant gloves.

Other: Lab coat, eyewash fountain in work area. Avoid the use of contact lenses in high fume/splash areas.

Work/Hygienic Practices: 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>Amber</td>
</tr>
<tr>
<td>Boiling Point:</td>
<td>174°F</td>
</tr>
<tr>
<td>Odor:</td>
<td>Alcoholic</td>
</tr>
<tr>
<td>Melting Point:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Specific Gravity:</td>
<td>0.8408</td>
</tr>
<tr>
<td>pH:</td>
<td>Neutral</td>
</tr>
</tbody>
</table>
Vapor Pressure: 44MM Hg @68F  
Solubility in Water: ND  
Vapor Density: 1.5  
Evaporation Rate: 1.4%  
Volatile by Volume: 87%  

10. STABILITY AND REACTIVITY  
General: Stable.  
Conditions to Avoid: Direct heat, open flames, ammonia, oxidizing agents, peroxides and storage in aluminum.  
Incompatible Materials: phosphorus, halogens, anhydrides, monomers, aldehydes, trichlorides  
Hazardous Decomposition / Combustion: Carbon dioxide/carbon monoxide.  
Hazardous Polymerization: Will not occur.  

11. TOXICOLOGICAL INFORMATION  
Carcinogenicity:  
NTP: No  
OSHA: No  
IARC: No  
LD50: Not established.  
LC50: Not established.  
Ethyl alcohol:  
LD50 oral – rat – 7,060mg/kg  
LC50 inhalation-rat-10h-20000ppm  
Specific target organ toxicity – single exposure (GHS)  
Inhalation – may cause respiratory irritation  

12. ECOLOGICAL INFORMATION  
Product not tested.  
Toxicity to fish (ethyl alcohol):  
LC50 – rainbow trout – 13,000 mg/l – 96h  
EC50- water flea – 9.30 mg/l – 48h  

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.
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 Flammable Division 2

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 Mexican regulations NOM-018-STPS-2015 and NOM-010-STPS-2014.

Regulatory Information China:
GB/T 16483-2008, GB/T 17519-2013, Safety Data Sheets for Chemical Products
GB 30000.2-29-2013, Rules for classification and labeling of chemicals (GHS)
Decree No. 591: Regulations on the Control Over Safety of Hazardous Chemicals.
This product has been classified using the Chinese Occupational Exposure Limit for Hazardous Agents in the Workplace, GBZ2-2007.

Malaysia:
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).

WARNING: This product can expose you to chemicals including [ethyl alcohol] which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov

SARA 313 Listing - 40 CFR 372.65: None

All ingredients are listed on the EPA TSCA Inventory.
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>Reactivity:</td>
<td>0</td>
</tr>
</tbody>
</table>

Revised Date: 5 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.