SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: 2212-35 ROSIN FLUX
SDS Number: SDS-4384
Revised Date: 17 MARCH 2015
Product Use: INDUSTRIAL USE - WAVE FLUX

MANUFACTURER:

In America:
The Indium Corporation of America
1676 Lincoln Ave., Utica NY 13502
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nswarts@indium.com

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In Asia:
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Asia-Pacific Operations-Singapore
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Singapore 628908
Information: +65 6268-8678

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USA: 1 (800) 424-9300
Outside USA: +1 (703) 527-3887

In China:
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No. 428 Xinglong Street
Suzhou Industrial Park
Suchun Industrial Square
Unit No. 14-C
Jiangsu Province, China 215126
## 2. HAZARDS IDENTIFICATION

### PRIMARY ROUTES OF ENTRY:

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

### GHS

<table>
<thead>
<tr>
<th>Signal Word</th>
<th>Hazard Statements</th>
<th>Precautionary statement(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Danger</td>
<td>H225 Highly flammable liquid and vapor</td>
<td>P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking</td>
</tr>
<tr>
<td></td>
<td>H317 May cause an allergic skin reaction</td>
<td>P233 Keep container tightly closed</td>
</tr>
<tr>
<td></td>
<td>H319 Causes serious eye irritation</td>
<td>P240 Ground/Bond container and receiving equipment</td>
</tr>
<tr>
<td></td>
<td>H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled</td>
<td>P261 Avoid breathing dust/fume/gas/mist/vapors/spray</td>
</tr>
<tr>
<td></td>
<td>H335 May cause respiratory irritation</td>
<td>P270 Do not eat, drink or smoke when using this product</td>
</tr>
<tr>
<td></td>
<td>H336 May cause drowsiness or dizziness</td>
<td>P273 Avoid release to the environment</td>
</tr>
</tbody>
</table>

### 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 has been known to 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>
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</thead>
<tbody>
<tr>
<td>ISOPROPANOL</td>
<td>40-50</td>
<td>67-63-0 (US)</td>
<td>980</td>
<td>983</td>
<td>1225</td>
</tr>
<tr>
<td>(PROPAN-2-OL)</td>
<td></td>
<td>(EU)</td>
<td>-</td>
<td>999</td>
<td>1250</td>
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<td>(ISOPROPYL ALCOHOL)</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>(Mexico)</td>
<td>980</td>
<td>-</td>
<td>1225</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(China)</td>
<td>-</td>
<td>350</td>
<td>700</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Singapore)</td>
<td>983</td>
<td>-</td>
<td>1230</td>
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<tr>
<td>ROSIN</td>
<td>35-40</td>
<td>8050-09-7</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>(EU)</td>
<td></td>
<td></td>
<td>-</td>
<td>0.05</td>
<td>0.15</td>
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<tr>
<td>ISOBUTYL ALCOHOL</td>
<td>10-25</td>
<td>78-83-1 (US)</td>
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<td>152</td>
<td>-</td>
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<tr>
<td>(EU)</td>
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<td></td>
<td>-</td>
<td>154</td>
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</tr>
<tr>
<td>(Canada)</td>
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<td></td>
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<td>152</td>
<td>227</td>
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<tr>
<td>(Singapore)</td>
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<td></td>
<td>152</td>
<td>-</td>
<td>-</td>
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<tr>
<td>(Mexico)</td>
<td></td>
<td></td>
<td>-</td>
<td>150</td>
<td>225</td>
</tr>
</tbody>
</table>

Symbol: Xi, F
Risk Phrases: R36/37/38, R11, R41, R42/43, R67
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: 61°F  Method: Closed Cup
Auto-ignition Temperature: N/A
Flammable Limits: Upper: 12 @77°F; Lower 2 @ 77°F
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: Keep containers tightly closed when not in use. Use care to avoid spills. Wear personal protective equipment. Ground and bond containers.

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. Store away from heat.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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

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 where airborne concentrations are expected to be elevated.
Skin: Compatible chemical resistant gloves. Use gloves such as nitrile, which are compatible with alcohols.
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

Appearance: Colorless  Boiling Point: 82°C (180°F)
Odor: Alcohol odor.  Evaporation Rate: >1
Specific Gravity: 0.892 @ 60°F | pH: Neutral
Vapor Pressure: 31 mm HG @25C | Solubility in Water: Insoluble
Vapor Density: 2.1 (air=1) | % Volatiles by volume: 100

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.

12. ECOLOGICAL INFORMATION
Biodegradability: Data not established.
Aquatic Toxicity: Data not established.
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 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).

WHMIS: Class B2 Flammable Liquid Toxic Material Causing Other Toxic Effects (eye irritation in animals).

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-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.

SARA 313 Listing - 40 CFR 372.65: None

All ingredients are listed on the EPA TSCA Inventory.

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
R42/43 May cause sensitization by inhalation and skin
R41 Risk of serious damage to eyes
R67 Vapors may cause drowsiness and dizziness
R 11 Highly Flammable

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 eyeface 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: 17 MARCH 2015
Prepared by: Nancy Swarts, Indium Corporation of America
Approved by: Nancy Swarts, Indium Corporation of America

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