INDIUM CORPORATION OF AMERICA ®EUROPE®ASIA-PACIFIC®
INDIUM CORPORATION (SUZHOU) ®
MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: RSA FLUX CAKE
MSDS Number: MSDS-4022
Product Use: Flux cake material
Revised Date: 13 FEBRUARY 2006

MANUFACTURER:

In America:
The Indium Corporation of America
1676 Lincoln Ave., Utica NY 13502
Information: (315) 853-4900

EMERGENCY PHONE:
CHEMTREC 24 hrs.
USA: 1 (800) 424-9300
Outside USA: 1 (703) 527-3887

In Europe:
Indium Corporation of Europe
7 Newmarket Ct.
Kingston, Milton Keynes, UK, MK 10 OAG
Information: +44 [0] 1908 580400

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

In Asia:
Asia-Pacific Operations-Singapore
29 Kian Teck Avenue
Singapore 628908
Information: +65 6268-8678

2. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>% wt</th>
<th>CAS Registry #</th>
<th>TLV-TWA</th>
<th>PEL</th>
<th>TLV-STEEL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>mg/m³</td>
<td>mg/m³</td>
<td>mg/m³</td>
</tr>
<tr>
<td>ROSIN</td>
<td>96-97</td>
<td>65997-05-9(US)</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(EU)</td>
<td>0.05</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.15(sensitiser)</td>
</tr>
</tbody>
</table>

Symbol: Xₙ
Risk Phrases: R36/37/38, R42
EU = European Exposure Limits
N.E. = Not established
3. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY:  
- Eye 
- Inhalation 
- Skin 
- Ingestion

Carcinogen listed in:  
- NTP 
- IARC 
- OSHA 
- Not Listed

POTENTIAL HEALTH EFFECTS:

Eye Contact: Moderately irritating to the eyes and if not removed promptly, may result in permanent damage.

Ingestion: Harmful if swallowed. May cause irritation and damage to mouth, esophagus and the gastrointestinal tract.

Inhalation: Heated vapor concentrations may be harmful if inhaled. Prolonged or repeated exposure to smoke or fumes may cause respiratory sensitization.

Skin Contact: Brief contact may cause slight irritation with itching and local redness. Allergic reaction may occur with prolonged exposure.

Chronic: Prolonged or repeated overexposure to mist or vapor generated at high temperatures may result in the inhalation of harmful amounts of material.

Note: The Indium Corporation does not recommend, manufacture, market or endorse any of its products for human consumption.

4. FIRST AID MEASURES

Eye Contact: Hold eyelids apart and flush eyes with plenty of 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: >200C  
Method: Not established.

Auto-ignition Temperature: Not established.

Flammable Limits: Limits not established.

Extinguishing Media: Use extinguishers appropriate for the surrounding fire conditions. Foam, dry chemical, water spray and carbon dioxide.

Special Fire Fighting Procedures: Firefighters must wear an approved self-contained breathing apparatus and full protective clothing.
6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Wear respirator and other personal protective clothing. (See Exposure Controls/Personal Protection Section). Extinguish or remove all sources of ignition. Absorb/scoop up spill, then place in a chemical waste container. Keep unnecessary personnel away.

7. HANDLING AND STORAGE

Handling Precautions: Avoid breathing vapors from heated material. Avoid contact with eyes, skin and clothing. Follow routine safe handling procedures. Use with adequate ventilation.

Storage Precautions: Keep away from heat and flame. Store in suitable, tightly capped, and labeled containers in cool dry, well-ventilated area. Store away from incompatible materials.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Local exhaust ventilation is recommended especially during heating.

Personal protection:
- Eyes: Chemical safety glasses/goggles.
- Respirator: A NIOSH approved or EU compliant CE marked air-purifying respirator with a particulate/fume/organic chemical cartridge is recommended under certain circumstances where airborne concentrations are expected to be elevated.
- Skin: Compatible chemical resistant gloves.
- Other: Lab coat, eye-wash fountain in work area. Avoid the use of contact lenses in high fume/dusty areas.

Work/Hygienic: 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>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Flux (solid) - amber</td>
<td>Boiling Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Odor</td>
<td>Rosin odor</td>
<td>Melting Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>Not applicable.</td>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not applicable.</td>
<td>Solubility in Water</td>
<td>Not soluble</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>(air=1) Not applicable.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

General: Stable.

Conditions to Avoid: High temperatures. Freezing temperatures

Incompatible Materials: Strong oxidizers

Hazardous Decomposition / Combustion: Carbon monoxide, Carbon dioxide

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity: NTP: No
OSHA: No
IARC: No

LD50: Not established.  LC50: Not established.

12. ECOLOGICAL INFORMATION

This section is subject to future development.

Biodegradability: Data not established.

Aquatic Toxicity: Data not established.

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. Not regulated under US DOT (United States Department of Transportation). Not hazardous under shipping regulations.

North American Emergency Guide Book – Not applicable

15. REGULATORY INFORMATION

The information in this Material 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.).

The information in this Material Safety Data Sheet meets the requirements of the EU under Chemicals (Hazard Information and Packaging for Supply) Regulations 1994 (CHIP 2) Regulation 6.

This product has been classified in accordance with the hazard criteria of the Commission Directive 91/155/EEC and EH40.

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation (CPR).
WHMIS: Not classified, insufficient data.
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.
SARA 313 Listing - 40 CFR 372.65 (FORM R REPORTING) – NONE
All ingredients are listed on the EPA TSCA Inventory.
EC Classification, Packaging and Labeling Requirements:
Symbol and Hazard Classification of Product

\[ X_n \]

Risk Phrases:
- R42 May cause sensitization by inhalation
- R36/37/38 Irritating to eyes, respiratory system and skin

Safety Phrases:
- S20/21 When using do not eat, drink or smoke
- S23 Do not breathe fumes
- S24/25 Avoid contact with skin and eyes
- S27 Take off immediately all contaminated clothing
- 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
- S7 Keep container tightly closed

16. OTHER INFORMATION

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

Revised Date: 13 FEBRUARY 2006
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.