SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: 5RA-RC FLUX
SDS Number: SDS-4149
Product Use: INDUSTRIAL USE-FLUX

Revised Date: 19 MARCH 2018

MANUFACTURER:

In America:
The Indium Corporation of America®
34 Robinson rd., Clinton, New York 13323
Information: (315) 853-4900

Chicago Material Division
80 Scott St.
Elk Grove Village, Illinois 60007
(847) 439-9134

In Europe:
Indium Corporation of America (European Operations)
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

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
2. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY:  
- Eye  
- Inhalation  
- Skin  
- Ingestion  
- Not Listed

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

Signal Word: Danger

Hazard Statements:
- H225  Highly Flammable liquid and vapor
- H317  May cause an allergic skin reaction
- H319  Causes serious eye irritation
- H334  May cause allergy or asthma symptoms or breathing difficulties if inhaled
- 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 container and receiving equipment
- H242  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
- P362  Take off contaminated clothing and wash before reuse
- 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:
- Eye irritant – (Category 2A)
- Flammable liquids - (Category 2)
- Specific target organ systemic 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 persistent nausea, vomiting and abdominal pain.

Inhalation:  
- Vapor may cause headaches and or dizziness.

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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<td>67-63-0 (US)</td>
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<td>(China)</td>
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<td>(2-Methylpropan-1-ol)</td>
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<td>0.15(sensitizer)</td>
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<td>PROPRIETARY</td>
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</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
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. All containers should be grounded. 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. Recommend personal protective equipment, if ventilation equipment is not available or is not adequate.

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 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>
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<tr>
<th>Property</th>
<th>Value</th>
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<tbody>
<tr>
<td>Appearance:</td>
<td>Amber</td>
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<tr>
<td>Boiling Point:</td>
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<tr>
<td>Odor:</td>
<td>Alcohol odor.</td>
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<tr>
<td>Evaporation Rate:</td>
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<tr>
<td>Specific Gravity:</td>
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<td>pH:</td>
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</table>
Vapor Pressure: 33 mm HG @68 F  
Solubility in Water: Not Soluble  
Vapor Density: 2.1 (air=1)  
% Volatiles by volume: 85

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 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. Contains a substance that is harmful to aquatic life.

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.
Alcohols, N.O.S., 3, UN 1987, PGII (isopropanol, isobutyl alcohol)

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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.).

SARA 313 Listing - 40 CFR 372.65: None

All ingredients are listed on the EPA TSCA Inventory.

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

Canadian WHMIS: Class B Division 2 Flammable, D2B 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-2015 and NOM-010-STPS-2014.

In China:
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
Information on exposure levels in China is from regulation document GBZ2-2002 Occupational Exposure Limit for Hazardous Agents in the Workplace.

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>
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<tr>
<th>HMIS Hazard Rating:</th>
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<tbody>
<tr>
<td>Fire:</td>
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<tr>
<td>Reactivity:</td>
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</table>

Revised Date: 19 MARCH 2018

Prepared by: Nancy Swarts, Indium Corporation of America

Approved by: Nancy Swarts, Indium Corporation of America

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