SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: WS-446-AL
SDS Number: SDS-4387
Revised Date: 18 SEPTEMBER 2018
Product Use: Industrial Use (mixture) - Liquid flux

MANUFACTURER:

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

In Europe:
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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
China Emergency: +86 4008417580

In China:
Indium Corporation (Suzhou) Co., Ltd.
No.428 Xinglong Street
Suzhou Industrial Park
Suchun Industrial Square
Unit No. 14-C
Information: (86) 512-6283-4900
2. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY: Carcinogen listed in
- Eye ()
- Inhalation ()
- Skin ()
- Ingestion ()
- NTP
- IARC
- OSHA
- Not Listed

Signal Word: Warning

Hazard statement(s)

H315 Causes skin irritation
H319 Causes serious eye irritation
H335 May cause respiratory irritation

Precautionary statement(s)

P233 Keep container tightly closed
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 +P364 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:
- Skin irritant- Category 2
- Eye irritant-Category 2A
- Respiratory irritant- Category 3

POTENTIAL HEALTH EFFECTS:

Eye Contact: Moderately to severely irritating to the eyes and if not removed promptly, may result in serious eye injury. Do not allow material to come in contact with the eyes.

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

Inhalation: Heated vapor concentrations may be harmful if inhaled. Moderately irritating to respiratory tract.

Skin Contact: Causes skin irritation.

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>POLYGLYCOL ETHER</td>
<td>40-45</td>
<td>9038-95-3</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>AMIDES</td>
<td>35-40</td>
<td>67700-97-4</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>PROPRIETARY ADDITIVES</td>
<td>15-25</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: >100°C (212°F)  Method: Not available

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.

Special Fire Fighting Procedures: Firefighters must wear NIOSH approved self-contained breathing apparatus and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Wearing a respirator may be necessary and appropriate personal protection (See
Exposure Controls/Personal Protective Section). Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Dispose of following all Federal, State and Local regulations.

7. HANDLING AND STORAGE

Handling

Precautions:

Storage Precautions:

7. HANDLING AND STORAGE

Handling

Precautions:

Storage Precautions:

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:

Personal protection:

Eyes:

Respirator:

Skin:

Other:

Work/Hygienic Practices:

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Odor:

Specific Gravity:

Vapor Pressure:

Vapor Density:

Boiling Point:

Melting Point:

pH:

Solubility in Water:

Vapor Pressure:

Solubility in Water:

10. STABILITY AND REACTIVITY

General:

Conditions to Avoid:

Incompatible Materials:

Hazardous Decomposition / Combustion:

Hazardous Polymerization:
11. TOXICOLOGICAL INFORMATION

Carcinogenicity:
- NTP: No
- OSHA: No
- IARC: No

LD50: Not established.  
LC50: Not established.

Product mixture not tested.

12. ECOLOGICAL INFORMATION

Product not tested.

13. DISPOSAL CONSIDERATION

Waste Disposal Method: Dispose of in accordance with all Federal, State and Local environmental regulations.

14. TRANSPORT INFORMATION

Transport in accordance with applicable international regulations and requirements. Not regulated under the USDOT. Non hazardous material.

Non hazardous for all shipping modes.

UN – none.

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.

WARNING: This product can expose you to chemicals including [trace amounts of 1,4 dioxane, propylene oxide, ethylene oxide] which is known to the State of California to cause cancer and [trace amounts of ethylene oxide] which is known to the State of California to cause birth defects or reproductive harm. For more information go to www.P65Warnings.ca.gov

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

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.

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). (GHS)

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
This product has been classified using the Chinese Occupational Limit for Hazardous Agents in the Workplace, GBZ2-2007

16. OTHER INFORMATION

HMIS Hazard Rating:     Health: 1     Fire: 1     Reactivity: 0

Revised Date: 18 SEPTEMBER 2018
Prepared by: Nancy Swarts, Indium Corporation of America
Approved by: Nancy Swarts, Indium Corporation of America

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