SAFETY DATA SHEET

User must review the contents of this (SDS) and determine what is applicable to their own country laws under Health and Safety and apply them as necessary. This (SDS) will not reference every countries Health and Safety Laws. It is the user's responsibility to determine what is applicable to them, including but not limited to review of any specific chemical lists and apply the requirements as necessary.

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier:  WS 3598  FLUX
SDS Number:  SDS- 5180  
Revised Date:  3 AUGUST 2018

Product Use:  INDUSTRIAL USE – WATER WASH FLUX

MANUFACTURER:

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

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Outside USA: +1 (703) 527-3887

In Europe:
The 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. 14C
Jiangsu Province, China  215126
Information: 86-512-6283-4900

In Asia:
The Indium Corporation of America
Asia-Pacific Operations-Singapore
29 Kian Teck Avenue
Singapore 628908
Information: +65 6268-8678
2. HAZARDS IDENTIFICATION

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

GHS:

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
- Specific target organ toxicity-single exposure - Category 3- respiratory system

POTENTIAL HEALTH EFFECTS:

Eye Contact: Irritating to the eyes and if not removed promptly.

Ingestion: May cause irritation.

Inhalation: May cause irritation to the respiratory tract.

Skin Contact: Causes skin irritation.

Chronic: Not established.

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

NOTE: The Indium Corporation does not recommend, manufacture, market or endorse any of it's product's 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-STEEL mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLYGLYCOL ETHER</td>
<td>50 - 60</td>
<td>67700-97-4</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>PROPRIETARY ALCOHOLS</td>
<td>30 – 40</td>
<td>-</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>PROPRIETARY ACTIVATORS</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: Not applicable

Method: Not available.

Auto-ignition Temperature: Not established.

Flammable Limits: Limits not established.

Extinguishing Media: Use extinguishers appropriate for the surrounding fire conditions. CO₂, foam, water.

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

6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Wear a respirator and appropriate personal protective equipment (See Exposure Controls/Personal Protective Section). Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Ventilate area. Dispose of following all Federal, State and Local regulations. Ensure area is ventilated.

7. HANDLING AND STORAGE

Handling Precautions: Keep containers tightly closed when not in use. Use care to avoid spills. Avoid breathing vapors from heated material. Avoid contact with eyes, skin and clothing. Use with adequate ventilation.

Storage Precautions: Store product in tightly capped original containers in a cool, dry area. Keep away from heat and flame. Store away from incompatible materials. Empty containers may be hazardous as they contain product residue.
8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Exhaust or point source ventilation should be sufficient to control airborne levels and keep exposure levels low.

Personal protection:
Eyes: Chemical safety glasses/goggles. Face shield for any splash hazards.

Respirator: An authority approved or compliant marked air-purifying respirator with a fume/organic chemical cartridge is recommended under certain circumstances where airborne concentrations are expected to be elevated or when proper ventilation is not adequate to protect the worker.

Skin: Compatible chemical resistant gloves, nitrile type is recommended. Recommend protective outer garment, apron and sleeves as appropriate. Avoid skin exposure.

Other: Eyewash fountain in work area. Avoid the use of contact lenses in high fume areas.

Work/Hygienic Practices: Maintain good housekeeping. Clean up spills immediately.

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 -yellow</td>
<td>Boiling Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Odor</td>
<td>Slight characteristic odor.</td>
<td>Melting Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1 g/cc</td>
<td>pH</td>
<td>4-8</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not applicable.</td>
<td>Solubility in Water</td>
<td>Not established</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>(air=1) Not applicable.</td>
<td></td>
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</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

General: Stable.

Conditions to Avoid: Freezing temperatures. High temperatures.

Incompatible Materials: Not established

Hazardous Decomposition / Combustion: Carbon monoxide, carbon dioxide. Gas fumes may form at elevated temperatures.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity: NTP: No. OSHA: No. IARC: No.

LD50: Not established. LC50: Not established.

Product mixture not tested. Product ingredients are not classified as carcinogens.

12. ECOLOGICAL INFORMATION

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

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation (CPR). All ingredients are listed on the Canadian – DSL.

This product has been classified in accordance with the guidelines set by the Dept of Industrial Health of the Republic of Singapore.

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

This product has been classified under the Mexican regulations NOM-018-STPS-2015 and NOM-010-STPS-2014.

In China:
This product has been classified using the Chinese Occupational Limit for Hazardous Agents in the Workplace, GBZ2-2007. 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 in accordance with: Malaysian – OCCUPATIONAL SAFETY AND HEALTH (CLASSIFICATION, LABELING AND SAFETY DATA SHEET OF HAZARDOUS CHEMICALS) REGULATION OCTOBER 2013 – (CLASS).

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: 1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fire: 0</td>
</tr>
<tr>
<td></td>
<td>Reactivity: 0</td>
</tr>
</tbody>
</table>

Revised Date: 3 AUGUST 2018

Prepared by: Nancy Swarts, Indium Corporation of America
Approved by: Nancy Swarts, Indium Corporation of America

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