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-788  
SDS Number: SDS-4793  
Revised Date: 30 JULY 2018  
Product Use: Industrial Use - Flux for soldering applications

MANUFACTURER:

In America:
The Indium Corporation of America®,  
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nswarts@indium.com

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

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

In China:  
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Suzhou Industrial Park  
Suchun Industrial Square  
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Jiangsu Province, China 215126  
Information: (86) 512-6283-4900

http://www.indium.com
2. HAZARDS IDENTIFICATION

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

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

GHS:

Signal Word: Warning

Hazard statements(s)
H319 Causes serious eye 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
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:
Eye irritant (Category 2A)

POTENTIAL HEALTH EFFECTS:

Eye Contact: Irritating to the eyes. May result in serious eye injury.

Ingestion: May cause irritation.

Inhalation: Heated vapor concentrations may be irritating to respiratory tract.

Skin Contact: May cause skin irritation.

Chronic: Not established.

WARNING: This product can expose you to chemicals including [trace amounts of 1,4 dioxane, propylene oxide, ethylene oxide] which are 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 other reproductive harm. 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>
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</thead>
<tbody>
<tr>
<td>POLYGLYCOL ETHER</td>
<td>33-36</td>
<td>9038-95-3</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>PROPRIETARY ALCOHOLS</td>
<td>60-65</td>
<td>-</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>PROPRIETARY AMINE</td>
<td>2-4</td>
<td>-</td>
<td>-</td>
<td>5</td>
<td>-</td>
</tr>
<tr>
<td>(Singapore)</td>
<td></td>
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</tbody>
</table>

N.E. = Not established  EU = European Union Occupational 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: >100 C  Method: Use extinguishers appropriate for the surrounding fire conditions.

Auto-ignition Temperature: Not established.

Flammable Limits: Limits not established, not flammable.

Extinguishing Media: Use extinguishers appropriate for the surrounding fire conditions.

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: Wear a respirator and appropriate Personal Protective (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. 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. 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: Good general ventilation should be sufficient to control airborne levels.

Personal protection:

Eyes: Chemical safety glasses/goggles. Face shield for 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.

Skin: Compatible chemical resistant gloves. Protective outer garment, apron and sleeves as appropriate.

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.

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: Flux – yellow, creamy

Odor: Mild characteristic odor.

Specific Gravity: 1 g/cc

Boiling Point: Not applicable.

Melting Point: Not applicable

pH: 4-8

Vapor Pressure: Not applicable.

Vapor Density: (air=1) Not applicable.

10. STABILITY AND REACTIVITY

General: Stable.

Conditions to Avoid: Freezing temperatures. High temperatures.

Incompatible Materials: Not established

Hazardous Decomposition / Combustion: Harmful organic fumes and toxic oxide 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 is not considered to be a carcinogen.

12. ECOLOGICAL INFORMATION

Product not tested. No information available.
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 for shipping (DOT/IATA/IMDG).

   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).

   WARNING: This product can expose you to chemicals including [trace amounts of 1,4 dioxane, propylene oxide, ethylene oxide] which are 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 other reproductive harm. For more information go to www.P65Warnings.ca.gov

   WHMIS: Not classified because of insufficient information.

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

   All ingredients are listed on the EPA TSCA Inventory.

   SARA 313 Listing - 40 CFR 372.65 - 10% SARA listed solvent (polyethylene glycol).

   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  
Physical Hazard: 0

Revised Date: 30 JULY 2018  
Prepared by: Nancy Swarts, Indium Corporation of America  
Approved by: Nancy Swarts, Indium Corporation of America

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