SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: WS-446AL-SP
SDS Number: SDS-4563
Product Use: INDUSTRIAL USE - WATER WASH TACFLUX
Revised Date: 18 APRIL 2018

MANUFACTURER:

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

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Information: +44 [0] 1908 580400

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

EMERGENCY PHONE:
CHEMTREC 24 hrs.
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Outside USA: +1 (703) 527-3887
In China: Emergency 86+ 4008417580

In China:
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No. 428 Xinglong Street
Suzhou Industrial Park
Suchun Industrial Square
Unit No. 14-C
Jiangsu Province, China 215126
Information: (86) 512-6283-4900

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: Danger

Hazard Statements:

- H225  Highly Flammable liquid and vapor
- H316  Causes mild skin irritation
- H319  Causes serious eye irritation
- 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
- 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
- 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:

- Serious eye damage/eye irritant – Category 2
- Flammable liquids - Category 2
- Skin – Category 3
- Specific target organ systemic toxicity (single exposure) – Category 3

POTENTIAL HEALTH EFFECTS:

- Eye Contact: Vapors may be irritating, liquid may damage eye tissue.
- Ingestion: May cause persistent nausea, vomiting and abdominal pain. Irritating to digestive tract.
- Inhalation: Vapor may cause headaches and or dizziness. Avoid inhalation of vapors. Irritating to respiratory tract.
- Skin Contact: Prolonged contact may cause irritation.
- Chronic: Over exposure to vapors may be harmful.

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 #/EINECS#</th>
<th>PEL mg/m³</th>
<th>TLV-TWA mg/m³</th>
<th>TLV-STEL mg/m³</th>
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<tbody>
<tr>
<td>ISOPROPANOL</td>
<td>32-36</td>
<td>67-63-0/200-661-7</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>(US)</td>
<td>980</td>
<td>983</td>
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<td></td>
</tr>
<tr>
<td>(EU)</td>
<td>-</td>
<td>999</td>
<td>1250</td>
<td></td>
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<tr>
<td>(Canada)</td>
<td>-</td>
<td>983</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>(Mexico)</td>
<td>-</td>
<td>350</td>
<td>700</td>
<td></td>
<td></td>
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<tr>
<td>(China)</td>
<td>980</td>
<td>-</td>
<td>1225</td>
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<tr>
<td>(Singapore)</td>
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<td>-</td>
<td>1230</td>
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<tr>
<td>PROPRIETARY ALCOHOLS</td>
<td>50-60</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
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<tr>
<td>NON HAZARDOUS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROPRIETARY ACTIVATORS</td>
<td>10-15</td>
<td>-</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
</tbody>
</table>

N.E. = Not established       EU = European 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:** 15°C (59°F) **Method:** Closed Cup

**Auto-ignition Temperature:** No information available

**Flammable Limits:** No information available

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

**Special Fire Fighting Procedures:** Wear protective clothing and self-contained breathing apparatus. Use water to cool fire exposed containers. Flammable vapors may travel great distances to ignition source and flash back.

6. ACCIDENTAL RELEASE MEASURES

**Spill or Leak Procedures:** Do not allow any materials to enter sewer system or waterway unless authorized to do so. Wear personal protective equipment. Eliminate sources of ignition. 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. Ground containers. Keep away from flame.

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. Overall general exhaust ventilation recommended in order to keep exposures to as low as possible.

Personal protection:

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

Respirator: An authority approved or compliant marked air-purifying respirator with a fume/organic chemical cartridge is recommended where airborne concentrations are expected to be elevated. Use respiratory protection in confined areas. Air purifying respirators will offer no protection in oxygen deficient areas. Ensure that the protection factors of the respirator are not exceeded.

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>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear</td>
</tr>
<tr>
<td>Odor</td>
<td>Alcohol odor.</td>
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<tr>
<td>Specific Gravity</td>
<td>1 g/cc</td>
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<tr>
<td>Vapor Pressure</td>
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<tr>
<td>Vapor Density</td>
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</tr>
<tr>
<td>Boiling Point</td>
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<tr>
<td>Evaporation Rate</td>
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</tr>
<tr>
<td>pH</td>
<td>4 - 8</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Soluble</td>
</tr>
<tr>
<td>% Volatiles by volume</td>
<td>No information</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

General: Stable.

Conditions to Avoid: Direct heat, open flames and storage in aluminum.

Incompatible Materials: acids/caustics

Hazardous Decomposition / Combustion: Carbon dioxide/carbon monoxide.

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

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.

UN1219, Isopropanol mixture, 3, PG II

Label: Flammable

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).

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 does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

This product has been classified in accordance with the Mexican regulations NOM-018-STPS-2015 and
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.

SARA 313 Listing - 40 CFR 372.65: none

All ingredients are listed on the EPA TSCA Inventory.

16. OTHER INFORMATION

HMIS Hazard Rating:  
Health: 1  
Fire: 3  
Reactivity: 0

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

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