# SAFETY DATA SHEET

## 1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product Identifier:</th>
<th>WF-1082</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDS Number:</td>
<td>SDS-6742</td>
</tr>
<tr>
<td>Revised Date:</td>
<td>2 NOVEMBER 2018</td>
</tr>
<tr>
<td>Product Use:</td>
<td>INDUSTRIAL USE</td>
</tr>
</tbody>
</table>

**MANUFACTURER:**

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

**In Europe:**
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Kingston, Milton Keynes, UK, MK 10 OAG
Information: +44 [0] 1908 580400

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

**EMERGENCY PHONE:**
CHEMTREC 24 hrs.
USA: 1 (800) 424-9300
Outside USA: +1 (703) 527-3887

**In China:**
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Suzhou Industrial Park
Suchun Industrial Square
Unit No. 14-C
Jiangsu Province, China 215126
Information: (86) 512-6283-4900
2. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY:

<table>
<thead>
<tr>
<th></th>
<th>XEye</th>
<th>XInhalation</th>
<th>XSkin</th>
<th>XIngestion</th>
<th>NTP</th>
<th>IARC</th>
<th>OSHA</th>
<th>XNot Listed</th>
</tr>
</thead>
</table>

Carcinogen listed in

GHS:

Signal Word: Danger

Hazard statement(s)

H225  Highly flammable liquid and vapor
H302  Harmful if swallowed
H319  Causes serious eye irritation
H336  May cause drowsiness or dizziness
H373  May cause damage to organs through prolonged or repeated exposure

Precautionary statement(s)

P210  Keep away from heat/sparks/open flames/hot surfaces – No smoking
P233  Keep container tightly closed
P240  Ground/Bond container and receiving equipment
P241  Use explosion-proof electrical/ventilating/lightening/equipment
P242  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 +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 + P341  IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
P305 + P351  IF IN EYES: Rinse continuously with water for several minutes (15 mins)

Classification:

Flammable Liquid – Category 2
Eye irritation – Category 2A
Acute toxicity-Oral- Category 4
Specific target organ toxicity- single exposure – Category 3
Specific target organ toxicity- (repeated exposure)-Category 2

POTENTIAL HEALTH EFFECTS:

Eye Contact:  Vapors may be irritating, liquid may result in serious eye irritation or harm.

Ingestion:  Harmful if swallowed.

Inhalation:  May cause throat irritation, headache or dizziness. Prolonged exposure may be harmful.

Skin Contact:  Prolonged contact may cause irritation.

Chronic:  Not established.
WARNING: This product can expose you to chemicals including [trace amounts of acetaldehyde, methyl isobutyl ketone] which are known to the State of California to cause cancer and [methanol, methyl isobutyl ketone] which are 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 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>
</tr>
</thead>
<tbody>
<tr>
<td>ETHANOL</td>
<td>50-80</td>
<td>64-17-5/200-578-6</td>
<td>1900</td>
<td>1900</td>
<td>1000ppm</td>
</tr>
<tr>
<td>WATER</td>
<td>10-40</td>
<td>7732-18-5</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>PROPRIETARY ACTIVATORS</td>
<td>5-25</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

IDLH- ETHANOL = 3300 ppm

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: 54F (12C) Method: TCC
Auto-ignition Temperature: 685F (363C) Ethanol
Flammable Limits: Upper limit 19%. Lower limit 3.3%. (ethanol)
Extinguishing Media: Use extinguishers appropriate for the surrounding fire conditions.
Special Fire Fighting Procedures: Standard fire fighting equipment
6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: DO NOT allow material to enter sewer system or waterway. Wear personal protective equipment, such as gloves and depending on the quantity a respirator with organic cartridges may be required. Clean up by absorption. Eliminate sources of ignition, ventilate area. Keep unnecessary personnel away. Put clean-up materials in a properly labeled metal drum. 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. Open containers require proper ventilation.

Storage Precautions: Store product in tightly capped original containers in a cool, dry area away from sources of ignition. 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 is recommended to keep exposure limits as low as possible.

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 where airborne concentrations are expected to be elevated.

Skin: Compatible chemical resistant gloves.

Other: Lab coat, eyewash fountain in work area. Avoid the use of contact lenses in high fume/splash 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>Liquid, colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>Alcoholic</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.925</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not available</td>
</tr>
<tr>
<td>Volatile by Volume</td>
<td>100%</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not available for mixture</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>pH</td>
<td>8.63</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Soluble</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not available for mixture</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

General: Stable.

Conditions to Avoid: Direct heat, open flames, sources of ignition.
Incompatible Materials: strong acids, strong oxidizing agents, acid anhydrides, acid chlorides
Hazardous Decomposition / Combustion: Carbon dioxide/carbon monoxide.
Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity:
- NTP: Known- ethyl alcohol
- OSHA: No
- IARC: yes- ethyl alcohol-Group 1

LD50:
Not established for mixture.

Ethyl alcohol:
LD50- 3450mg/kg mouse  LC 50 inhalation- 20000 ppm rat

Mutagenic effects: have occurred in humans
Reproductive effects: adverse reproductive effects have occurred in humans
Single exposure- central nervous effects
Repeated exposure- Liver, Kidney, Blood

12. ECOLOGICAL INFORMATION

Product not tested.

Ethyl alcohol-
- Freshwater algae- EC 50 (72H) = 275 mg/l
- Freshwater fish- fathead minnow- LC50- 14200 mg/96h
- Water flea- EC50- 9268mg/l/48h
- EC50- 10800 mg/l/24h

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. Dispose of

14. TRANSPORT INFORMATION

Transport in accordance with applicable regulations and requirements.

UN 1170, Ethanol, 3, PG II
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: methanol

All ingredients are listed on the EPA TSCA Inventory.

WARNING: This product can expose you to chemicals including [trace amounts of acetaldehyde, methyl isobutyl ketone] which are known to the State of California to cause cancer and [methanol, methyl isobutyl ketone ] which are known to the State of California to cause birth defects or other 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).

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-0180STPS-2015 and NOM-010-STPS-2014.

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

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).
16. OTHER INFORMATION

HMIS Hazard Rating:

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>2</td>
</tr>
<tr>
<td>Fire</td>
<td>3</td>
</tr>
<tr>
<td>Reactivity</td>
<td>0</td>
</tr>
</tbody>
</table>

Revised Date: 2 NOVEMBER 2018

Prepared by: Nancy Swarts, Indium Corporation of America

Approved by: Nancy Swarts, Indium Corporation of America

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