



SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: WS3401 FLUX

SDS Number: SDS-4390

Revised Date: 26 JULY 2018

Product Use: INDUSTRIAL USE (MIXTURE) - LIQUID FLUX (WATER WASH)

MANUFACTURER:

In America:

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<http://www.indium.com>

2. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY:

⊕Eye ⊕Inhalation ⊕Skin ⊕Ingestion NTP

Carcinogen listed in

IARC OSHA ⊕Not Listed

GHS Classification:



Signal Word: Danger

Hazard statement(s)

- H225 Highly Flammable liquid and vapor
- H315 Causes skin irritation
- H319 Causes serious eye irritation
- H335 May cause respiratory 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/Bond 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
- P301 +P314 IF SWALLOWED: Get Medical advice/attention if 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)
- P403 Store in well ventilated place
- P405 Store locked up
- P5010 Dispose of content/container in accordance with local/regional/national regulations.

Classification:

- Flammable Liquid- Category 2
- Eye irritation- Category 2A
- Skin irritation- Category 3
- Specific target organ toxicity- single exposure-Category 3-respiratory system

POTENTIAL HEALTH EFFECTS/EXPOSE:

- Eye Contact:** Vapors may be irritating, liquid may damage eye tissue, and causes irritation to eyes.
- Ingestion:** If swallowed may cause irritation or with overexposure persistent nausea, vomiting and abdominal pain.
- Inhalation:** If inhaled may cause irritation to respiratory system. Vapor may cause headaches and or dizziness.

Skin Contact: Prolonged direct contact may cause dryness and irritation.

Chronic: Not established. No information available.

Signs and Symptoms of Exposure: Central nervous system depression, prolonged or repeated exposure can cause: nausea, headache, vomiting, narcosis, drowsiness. Overexposure may cause mild, reversible liver effects.

Note: **The Indium Corporation does not recommend, manufacture, market or endorse any of its products for human consumption.**

3. COMPOSITION / INFORMATION ON INGREDIENTS

| Components | % wt | CAS Registry # | PEL mg/m ³ | TLV-TWA mg/m ³ | TLV-STEL mg/m ³ |
|--------------------|---------|----------------|--------------------------|------------------------------|-------------------------------|
| ISOPROPANOL | 38 - 45 | 67-63-0 (US) | 980 | 983 | 1225 |
| (PROPAN-2-OL) | | (EU) | - | 999 | 1250 |
| (IPA) | | (Canada) | - | 983 | 1228 |
| | | (Singapore) | 983 | - | 1230 |
| | | (Mexico) | - | 980 | 1225 |
| | | (China) | - | 350 | 700 |
| FATTY ACIDS, C6-12 | 10-15 | 67762-36-1 | N.E. | N.E. | N.E. |
| POLYGLYCOL ETHER | 18-36 | 9038-95-3 | N.E. | N.E. | N.E. |
| ALCOHOL C6-C12 | 4 – 34 | 68603-15-6 | N.E. | N.E. | N.E. |

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: 71F (22C) **Method:** Closed Cup

Auto-ignition Temperature: Not Available

Flammable Limits: Not Available

Extinguishing Media: Dry chemical, Water or CO₂. 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 material to enter sewer system or waterway. Wear personal protective equipment. Eliminate sources of ignition. Ventilate area in accordance with regulations. Adsorb spilt material. Or cover with absorbent material and then clean up. Do not throw into regular trash bins. 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 sources of ignition.

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. Keep away from heat and flame.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Face velocity >2.1 cubic feet/minute in confined areas. Exhaust ventilation is advised to keep exposures 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. Confined areas may require additional protection.

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/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

| | | | |
|--------------------------|---------------|-----------------------------|--|
| Appearance: | Liquid flux | Boiling Point: | >89C (does not vaporize) |
| Odor: | Alcohol odor. | Evaporation Rate: | Not available |
| Specific Gravity: | Not available | pH: | Not applicable (no pH value) (not corrosive) |
| Vapor Pressure: | Not available | Solubility in Water: | Dissolves in water |
| Vapor Density: | Not available | | |

10. STABILITY AND REACTIVITY

| | |
|--|---|
| General: | Stable. |
| Conditions to Avoid: | Direct heat, open flames and storage in aluminum. |
| Incompatible Materials: | Combustible materials, oxidizing materials |
| 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. |
|--------------|------------------|--------------|------------------|

Product mixture not tested.

Isopropyl alcohol-

RTECS: NT8050000

Signs and Symptoms of Exposure: Central nervous system depression, prolonged or repeated exposure can cause: nausea, headache, vomiting, narcosis, drowsiness. Overexposure may cause mild, reversible liver effects.

Specific target organ toxicity: May cause drowsiness or dizziness.

LD50 Oral – rat- 5,045 mg/kg

Inhalation LC50 – rat- 8h- 16000 ppm

Dermal LD50 – rabbit – 12,800 mg/kg

Skin corrosion- rabbit- mild skin irritant

Serious eye irritant/eye damage- eyes-rabbit – eye irritation- 24h

Polyglycol ether –

RTECS: MD0911000

LD50-oral-rat-12,792 mg/kg

LD50-dermal-rabbit >20,800 mg/kg

Product not classified as a carcinogen. Product does not contain any carcinogenic substances.

12. ECOLOGICAL INFORMATION

Product mixture not tested.

Isopropyl alcohol –

Toxicity to fish: LC50-pimephales promelas (fathead minnow) – 9,640 mg/l – 96h

Toxicity to algae: EC50 – desmodesmus subspicatus (green algae) > 2,000 mg/l – 72h

Product is not classified as harmful to the environment.

13. DISPOSAL CONSIDERATION

Waste Disposal Method: Dispose of in accordance with all Federal, State and Local environmental regulations. Flammable materials are considered hazardous waste. Contact a permitted environmental waste disposer.
In Europe follow the Special Waste Regulations.

14. TRANSPORT INFORMATION

Transport in accordance with applicable international regulations and requirements.

Shipping Name: UN 1219, Isopropanol, 3, PG II (mixture)



North America Emergency Guide Book – Guide #129

Marine Pollutant: No

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.

SARA 313 Listing - 40 CFR 372.65: none

All ingredients are listed on the EPA TSCA Inventory.

All ingredients are listed on the Korean Inventory of Existing Chemicals (KECL)

Ingredients are listed on the following countries chemical lists:

EU/Canada (DSL)/China

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

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).

Regulatory Information China:

GB/T 16483-2008, GB/T 17519-2013, Safety Data Sheets for Chemical Products

GB 30000.2-29-2013, Rules for classification and labeling of chemicals (GHS)

Decree No. 591: Regulations on the Control Over Safety of Hazardous Chemicals.

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

Product does not contain any listed EU REACH Substances of Very High Concern.

16. OTHER INFORMATION

| | | |
|----------------------------|--------------------|---|
| HMIS Hazard Rating: | Health: | 2 |
| | Fire: | 3 |
| | Reactivity: | 0 |

Revised Date: 26 JULY 2018

Prepared by: Nancy Swarts, Indium Corporation of America

Approved by: Nancy Swarts, Indium Corporation of America

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