



**INDIUM CORPORATION OF AMERICA®\EUROPE®\ASIA-PACIFIC®  
INDIUM CORPORATION (SUZHOU)®**

**SAFETY DATA SHEET**

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Identifier:** WS575-SP FLUX

**SDS Number:** SDS-5551

**Revised Date:** 19 DECEMBER 2013

**Product Use:** INDUSTRIAL USE (MIXTURE) - LIQUID FLUX  
APPLICATION – SPRAYABLE FLIP CHIP FLUX

**MANUFACTURER:**

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## 2. HAZARDS IDENTIFICATION

### PRIMARY ROUTES OF ENTRY:

⊕Eye    ⊕Inhalation    ⊕Skin    ⊕Ingestion    NTP    IARC    OSHA    ⊕Not Listed

### Carcinogen listed in

GHS:



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            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)

### POTENTIAL HEALTH EFFECTS:

**Eye Contact:**    Vapors may be irritating, liquid may damage eye tissue, and causes burn or irritates eyes.

**Ingestion:**        Harmful if swallowed. May cause persistent nausea, vomiting and abdominal pain.

**Inhalation:**        May cause irritation to respiratory system. Vapor may cause headaches and or dizziness.

**Skin Contact:**    Prolonged contact may cause dryness, irritation and can cause dermatitis.

**Chronic:**            Not established.

**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 <sup>3</sup>	TLV-TWA mg/m <sup>3</sup>	TLV-STEL mg/m <sup>3</sup>
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

PROPRIETARY ACTIVATORS 19 - 44 - N.E. N.E. N.E.

POLYGLYCOL ETHER 18 - 36 9038-95-3 N.E. N.E. N.E.

Symbol: Xi, F

Risk Phrases: R36/37/38, R11, R67

N.E. = Not established

EU = European Exposure Limits

**DOES NOT CONTAIN ANY EU SUBSTANCES OF VERY HIGH CONCERN (SVHC)**

**4. FIRST AID MEASURES**

- Eye Contact:** Hold eyelids apart and flush eyes with plenty of 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:** 71°F (22C) **Method:** Closed Cup

**Auto-ignition Temperature:** Not Available

**Flammable Limits:** Not Available

**Extinguishing Media:** Dry chemical, Water or CO<sub>2</sub>. 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 all 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

<b>Appearance:</b>	Liquid flux	<b>Boiling Point:</b>	Not available
<b>Odor:</b>	Alcohol odor.	<b>Evaporation Rate:</b>	Not available
<b>Specific Gravity:</b>	Not available	<b>pH:</b>	N/A
<b>Vapor Pressure:</b>	Not available	<b>Solubility in Water:</b>	Not available
<b>Vapor Density:</b>	Not available		

**10. STABILITY AND REACTIVITY**

<b>General:</b>	Stable.
<b>Conditions to Avoid:</b>	Direct heat, open flames and storage in aluminum.
<b>Incompatible Materials:</b>	Combustible materials, oxidizing materials
<b>Hazardous Decomposition / Combustion:</b>	Carbon dioxide/carbon monoxide.
<b>Hazardous Polymerization:</b>	Will not occur.

**11. TOXICOLOGICAL INFORMATION**

<b>Carcinogenicity:</b>	National Toxicity Program	<b>NTP:</b>	No
	Occupational Safety & Health Administration	<b>OSHA:</b>	No
	International Agency for Research on Cancer	<b>IARC:</b>	No

<b>LD50:</b>	Not established.	<b>LC50:</b>	Not established.
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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

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Polyglycol ether –

RTECS: MD0911000

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

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

**12. ECOLOGICAL INFORMATION**

Product 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

**13. DISPOSAL CONSIDERATION**

<b>Waste Disposal Method:</b>	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.
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## 14. TRANSPORT INFORMATION

Transport in accordance with applicable regulations and requirements.

Shipping Name: UN 1219, Isopropanol, 3, PG II



North America Emergency Guide Book – Guide #129

Marine pollutant: No

## 15. REGULATORY INFORMATION

The information in this Material 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.

### Taiwan:

This product contains a substance listed as a harmful material: isopropyl alcohol, a substance listed in the Regulations of Labeling and Hazard Communication of Dangerous and Harmful Materials under Attachment II. This is so specified under the Taiwan Regulations for Governing Prevention of Organic Solvent Toxication.

This product does not contain any other listed or known listed hazardous material found in Attachment II of the Regulations for Governing Prevention of Organic Solvent Toxication.

This product contains a substance, isopropyl alcohol a flammable liquid, classified as a Hazardous Material under Attachment I in Article 2. Paragraph 1, Item 1, of the Regulations of Labeling and Hazardous Communication of Dangerous and Harmful Materials.

This product does not contain any substances classified as Taiwan Precursor chemicals.

This product does not contain any other substances found on either the first or second stage listings of chemical substances found in the Regulations of Labeling and Hazard Communication of Dangerous and Harmful Materials.

This msds was developed following the guidelines of GHS and the Taiwan National Standard 15030 which has adopted those principles.

This product does not contain any Taiwan listed toxic classified substances.

SARA 313 Listing - 40 CFR 372.65: none

All ingredients are listed on the EPA TSCA Inventory.

This product has been classified under the Mexican regulations NOM-018-STPS-2000 and NOM-010-STPS-1999.

This product has been classified using the Chinese Occupational Exposure Limit for Hazardous Agents in the Workplace, GBZ2-2002.

Complies with RoHS 2 (2011/65/EU)

EC Classification, Packaging and Labeling Requirements:

Symbol and Hazard Classification of Product

Xi,F

**Risk Phrases:**

R36/37/38 Irritating to eyes, respiratory system and skin  
 R 11 Highly Flammable  
 R67 Vapors may cause drowsiness and dizziness

**Safety Phrases:**

S16 Keep away from sources of ignition - "No Smoking"  
 S20/21 When using do not eat, drink or smoke  
 S23 Do not breathe fumes  
 S24/25 Avoid contact with skin and eyes  
 S28 After contact with skin wash immediately with plenty of soap and water  
 S36/37/39 Wear suitable protective clothing, gloves and eye/face protection  
 S7 Keep container tightly closed

## 16. OTHER INFORMATION

**HMIS Hazard Rating:**

<b>Health:</b>	2
<b>Fire:</b>	3
<b>Reactivity:</b>	0

**Revised Date:** 19 DECEMBER 2013

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

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

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