



SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: WS575-SP FLUX

SDS Number: SDS-5551

Revised Date: 3 JULY 2018

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 Carcinogen listed in IARC OSHA ⊕Not Listed

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 + 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:

Flammable liquids- Category 2

Skin irritation- Category 2

Serious eye irritation- Category 2A

Specific target organ, single exposure; respiratory tract irritation- Category 3

Specific target organ toxicity, single exposure; narcotic effects- Category 3

POTENTIAL HEALTH EFFECTS:

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

Ingestion: May be harmful if swallowed.

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.



WARNING: This product can expose you to chemicals including [trace amounts of propylene oxide] which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov

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
PROPRIETARY ACTIVATORS	19 - 44	-	N.E.	N.E.	N.E.
POLYGLYCOL ETHER	18 - 36	9038-95-3	N.E.	N.E.	N.E.

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:** 71°F (22C) **Method:** Closed Cup
- Auto-ignition Temperature:** Not Available

Flammable Limits:	Not Available
Extinguishing Media:	Dry chemical, Water or CO ₂ . 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/Hygenic 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:	Not available
Odor:	Alcohol odor.	Evaporation Rate:	Not available
Specific Gravity:	0.947-0.967 g/cc	pH:	N/A
Vapor Pressure:	Not available	Solubility in Water:	Not available

Vapor Density:	Not available
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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.
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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

Polyglycol ether –

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

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 regulations and requirements.

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



North America Emergency Guide Book – Guide #129

Flammable liquid

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.).

SARA 313 Listing - 40 CFR 372.65: none

All ingredients are listed on the EPA TSCA Inventory.



WARNING: This product can expose you to chemicals including [trace amounts of propylene oxide] which is known to the State of California to cause cancer. 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.

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 SDS 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.

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.

Complies with RoHS 2 (2011/65/EU) and does not contain any phthalates.

16. OTHER INFORMATION

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

Revised Date: 3 JULY 2018

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