



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

SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: 2653-30 FLUX

MSDS Number: MSDS-4542

Revised Date: 1 APRIL 2010

Product Use: INDUSTRIAL USE - WAVE SOLDER FLUX

MANUFACTURER:

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2. HAZARDS IDENTIFICATION

GHS:



Warning word: Danger

PRIMARY ROUTES OF ENTRY:

Eye Inhalation Skin Ingestion

Carcinogen listed in

NTP IARC OSHA Not Listed

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 and dermatitis.
- Chronic:** Over exposure to vapors may be harmful. Not established.
- NOTE:** **The Indium Corporation does not recommend, manufacture, market or endorse any of its products for human consumption.**
- WARNING:** **This product contains a chemical (s) known to the State of California to cause cancer and/or birth defects (or other reproductive harm). (Contains trace amounts of 1, 4 Dioxane, Ethylene oxide)**

3. COMPOSITION / INFORMATION ON INGREDIENTS

Components	% wt	CAS Registry #/EINECS#	PEL mg/m ³	TLV-TWA mg/m ³	TLV-STEL mg/m ³
ISOPROPANOL (PROPAN-2-OL) (ISOPROPYL ALCOHOL)	65-70	67-63-0/200-661-7 (US)	980	983	1225
		(EU)	-	999	1250
		(Canada)	-	983	1228
		(Mexico)	980	-	1225
		(China)	-	350	700
		(Singapore)	983	-	1230
AMMONIUM CHLORIDE	2-2.5	12125-02-9(US)	-	10(fume)	20
		(EU)	-	10(fume)	20
		(Canada)	-	10(fume)	20
		(Singapore)	10(fume)	-	20
		(Mexico)	-	10(fume)	20
PROPRIETARY ADDITIVES	8-15		N.E.	N.E.	N.E.
SOLVENT	18-20	-	N.E.	N.E.	N.E.

Symbol: XI, F Risk Phrases: R36/37/38, R11

N.E. = Not established

EU = European Exposure Limits

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:** 12°C (54°F) **Method:** Closed Cup
- Auto-ignition Temperature:** 750 F
- Flammable Limits:** Upper: 12 @77°F; Lower 2 @ 77°F
- Extinguishing Media:** Dry chemical, foam, 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 material to enter sewer system or waterway. Always check with local and state regulatory agencies for their guidelines on disposal and spills. 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 from static electricity. Use in vented areas.
- 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. Store in cool, dry area away from ignition sources.

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. Ventilate well.
- 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/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:	Colorless	Boiling Point:	80°C (175°F)
Odor:	Alcohol odor.	Specific Gravity:	0.833 +/- 0.003 @ 60° F
pH:	Not available	Solubility in Water:	Soluble
Vapor Pressure:	33 mm HG @ 68 F		
Vapor Density:	2.1 (air=1)		

10. STABILITY AND REACTIVITY

General:	Stable.
Conditions to Avoid:	Direct heat, open flames and storage in aluminum.
Incompatible Materials:	Anhydrides, halogens, phosphorus, trichlorides, monomers, aldehydes
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

Product contains trace levels of 1, 4 Dioxane and Ethylene oxide

LD50:	Not established.	LC50:	Not established.
Isopropanol: LD50 (oral, rat): 4720 mg/kg			
Isopropanol: LD50(dermal), rabbit) 12890 mg/kg			

12. ECOLOGICAL INFORMATION

This section is subject to future development. Product not tested.
 Proprietary ingredient (7%) is acutely harmful for aquatic organisms.

13. DISPOSAL CONSIDERATION

Waste Disposal Method: Dispose of in accordance with all Federal, State and Local environmental regulations.
 Recycle or reuse as applicable.

14. TRANSPORT INFORMATION

Transport in accordance with applicable regulations and requirements.
 UN1219, Isopropanol 3, PG II (mixture)



North American Emergency Guide Book – Guide # 129

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.).

The information in this Material Safety Data Sheet meets the requirements of the EU under Chemicals (Hazard Information and Packaging for Supply) Regulations 1994 (CHIP 2) Regulation 6.

This product has been classified in accordance with the hazard criteria of the Commission Directive 91/155/EEC and EH40.

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-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,

WARNING: This product contains a chemical (s) known to the State of California to cause cancer and/or birth defects (or other reproductive harm). (Contains trace amounts of 1, 4 Dioxane, Ethylene oxide)

SARA 313 Listing - 40 CFR 372.65: trace amounts of 1, 4 Dioxane

All ingredients are listed on the EPA TSCA Inventory.

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

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

S62 If swallowed, do not induce vomiting seek medical advice immediately and show container or label

S7 Keep container tightly closed

RoHS (Restriction of Hazardous Substances) Compliance Statement: This product complies with the requirements of the EU Directive 2002/95/EC regarding the restriction of certain hazardous substances in electronic equipment. This product does not contain any metals and does not contain any flame-retardants.

16. OTHER INFORMATION

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

Revised Date: 1 APRIL 2010

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