



## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Identifier:** NR-10-D FLUX

**SDS Number:** SDS-HG4017

**Revised Date:** 22 NOVEMBER 2017

**Product Use:** INDUSTRIAL USE - WAVE SOLDER FLUX

### MANUFACTURER:

#### In America:

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

#### EMERGENCY PHONE:

**CHEMTREC 24 hrs.**

**USA: 1 (800) 424-9300**

**Outside USA: +1 (703) 527-3887**

#### In Europe:

Indium Corporation of Europe  
7 Newmarket Ct.  
Kingston, Milton Keynes, UK, MK 10 OAG  
Information: +44 [0] 1908 580400

#### In China:

Indium Corporation (Suzhou), Co., Ltd.  
No. 428 Xinglong Street  
Suzhou Industrial Park  
Suchun Industrial Square  
Unit No. 14-C  
Jiangsu Province, China 215126  
Information: (86) 512-6283-4900

#### In Asia:

Indium Corporation of America  
Asia-Pacific Operations-Singapore  
29 Kian Teck Avenue  
Singapore 628908  
Information: +65 6268-8678



## 2. HAZARDS IDENTIFICATION

GHS:



Signal Word: Danger

Hazardous statement(s)

- H225 Highly flammable liquid and vapor
- H319 Causes serious eye irritation
- H336 May cause drowsiness and 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
- P241 Use explosion-proof electrical/ventilating/lightening equipment
- P242 Use only non-sparking tools
- P243 Take precautionary measures against static discharge
- 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)

Classification

- Flammable Liquid- Category 2
- Eye irritation- Category 2A
- Specific target organ toxicity- single exposure – Category 3, central nervous system

**PRIMARY ROUTES OF ENTRY:**

\*Eye      \*Inhalation      \*Skin      \*Ingestion      NTP      IARC      OSHA      \*Not Listed

**Carcinogen listed in**

**POTENTIAL HEALTH EFFECTS:**

- Eye Contact:**      Vapors may be irritating, liquid may damage eye tissue.
- Ingestion:**      May cause persistent nausea, vomiting and abdominal pain. May cause irritation.
- Inhalation:**      Vapor may cause headaches and or dizziness. May cause irritation.
- Skin Contact:**      Prolonged contact may cause irritation.
- 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	95	67-63-0 (US)	980	983	1225
( PROPAN-2-OL)		(EU)	-	999	1250
(ISOPROPYL ALCOHOL)		(Canada)	-	983	1228
		(Mexico)	980	-	1225
		(China)	-	350	700
		(Singapore)	983	-	1230
ADIPIIC ACID MIXTURE	5	124-04-9	N.E.	N.E.	N.E.

N.E. = Not established

EU = European 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:** 58F (14C)      **Method:** Closed Cup

**Auto-ignition Temperature:** 750F

**Flammable Limits:** Upper: 12.7 @77°F; Lower 2 @ 77°F

**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 chemical product to enter sewer system or waterway. 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. Ventilated area.

**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. Ventilated area.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering Controls:** Face velocity >2.1 cubic feet/minute in confined areas. Recommend personal protective equipment. Overall general exhaust required.

### Personal protection:

**Eyes:** Chemical safety glasses/goggles. Face shield for slash 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. Use gloves such as nitrile, which are compatible with alcohol.

**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>	Colorless	<b>Boiling Point:</b>	82°C (180°F)
<b>Odor:</b>	Alcohol odor.	<b>Evaporation Rate:</b>	2.88
<b>Specific Gravity:</b>	0.796 @ 60° F	<b>pH:</b>	4.8 (as is)
<b>Vapor Pressure:</b>	40 mm HG @23.8C	<b>Solubility in Water:</b>	Soluble
<b>Vapor Density:</b>	2.1 (air=1)	<b>% Volatiles by volume:</b>	98

## 10. STABILITY AND REACTIVITY

**General:** Stable.

**Conditions to Avoid:** Direct heat, open flames and storage in aluminum.

**Incompatible Materials:** Anhydrides, halogens, oxidizing agents

**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 not tested.

Isopropyl alcohol:  
LD50 oral-rat-5,045 mg/kg  
LC50 Inhalation-rat-8h-16000 ppm  
LD50-dermal-rabbit-12,800 mg/kg

## 12. ECOLOGICAL INFORMATION

Product not tested.

Isopropyl alcohol:  
LC50-Pimephales promelas (fathead minnow)- 9,640 mg/l – 96h  
EC50-Daphnia magna (water flea)-5,102 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.

## 14. TRANSPORT INFORMATION

Transport in accordance with applicable regulations and requirements.



UN1219, ISOPROPANOL, 3, PG II

North American Emergency Guide Book – Guide # 129

## 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.

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-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.

**16. OTHER INFORMATION**

<b>HMIS Hazard Rating:</b>	<b>Health:</b>	2
	<b>Fire:</b>	3
	<b>Reactivity:</b>	0

**Revised Date:** 22 NOVEMBER 2017

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

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

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