



INDIUM CORPORATION OF AMERICA
®\EUROPE®\ASIA-PACIFIC®/INDIUM CORPORATION (SUZHOU) ®
SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: INDALLOY FLUX 2

SDS Number: SDS- LF002

Revised Date: 7 NOVEMBER 2016

Product Use: Industrial Use – Liquid Flux-soldering

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)

H314 Causes severe skin burns and eye damage

Precautionary statement(s)

P233 Keep container tightly closed
 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+ P310 IF SWALLOWED: IMMEDIATELY Call a POISON CENTER or doctor/physician
 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)
 P405 Store locked up
 P501 Recycle and or dispose of contents/containers to hazardous water treatment or remove by licensed waste removal company: in accordance with local/regional/national/international regulations.

GHS Classification:

Skin Corrosion. Category 1B

POTENTIAL HEALTH EFFECTS:

Overview: Danger, Corrosive, Causes burns
Eye Contact: Irritating to the eyes and if not removed promptly, may result in serious eye injury. Do not allow material to come in contact with the eyes. Mists and fumes can cause severe irritation.
Ingestion: May be harmful if swallowed. Corrosive. Causes burns to the mouth and throat and gastro-intestinal system.
Inhalation: Heated vapor concentrations may be harmful if inhaled. Irritating to respiratory tract. Symptoms of over exposure include weakness, dry cough, chest pain, shortness of breath and difficulty breathing.
Skin Contact: May cause irritation and burns. Material is corrosive to tissue.
Chronic: Prolonged or repeated contact by skin may cause skin burns.

NOTE: The Indium Corporation does not recommend, manufacture, market or endorse any of its product's for human consumption.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Components	% wt	CAS Registry #/ EINECS	PEL mg/m ³	TLV-TWA mg/m ³	TLV-STEL mg/m ³
PHOSPHORIC ACID	40-65	7664-38-2/231-633-2			
		(US)	1	1	3
(ORTHOPHOSPHORIC ACID)		(EU)	-	1	2
		(Canada)	-	1	3
		(Singapore)	1	-	3
		(China)	-	1	3
WATER	20	7732-18-5	N.E.	N.E.	N.E.
ADDITIVES (NON HAZARDOUS)	15-40	-	N.E.	N.E.	N.E.

N.E. = Not established

The ingredients and product performance has not changed for this product. The updates in range of ingredients better represents what is contained within this product.

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:	Not flammable	Method:	Not applicable
Auto-ignition Temperature:	Not established.		
Flammable Limits:	Limits not established, not flammable.		
Extinguishing Media:	Use extinguishers appropriate for the surrounding fire conditions.		
Special Fire Fighting Procedures:	Firefighters must wear NIOSH approved self-contained breathing apparatus (SCBA) and full protective clothing. If involved in fire, thermal decomposition may produce toxic and irritating fumes and gases which may include phosphorus oxides, nitrogen oxides and ammonia. Contact with most metals generates highly flammable and explosive hydrogen gas.		

6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures:	Wear a respirator and appropriate personal protection (See Exposure Controls/Personal Protective Section). Ventilate area. Absorb/neutralize spill with soda ash or lime then place in a chemical waste container. Clean up immediately. Dispose of following all Federal, State and Local regulations. In the EU refer to the Special Waste Regulations. Do not flush to drain.
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7. HANDLING AND STORAGE

Handling Precautions:	Keep containers tightly closed when not in use. Use care to avoid spills. Avoid breathing vapors from heated material. Avoid contact with eyes, skin and clothing. Use with adequate ventilation.
Storage Precautions:	Store product in tightly capped original containers in a cool, dry area. Keep away from heat and flame. Store away from incompatible materials. Empty containers may be hazardous as they contain product residue. Do not re-use for other purposes.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:	Exhaust ventilation should be sufficient to control airborne and exposure levels.
Personal protection:	
Eyes:	Chemical safety glasses/goggles. Face shield for any splash hazards.
Respirator:	An authority approved or compliant marked air-purifying respirator with a fume/acid gas chemical cartridge is recommended under certain circumstances where airborne concentrations are expected to be elevated or during severe mist conditions.
Skin:	Compatible chemical resistant nitrile rubber or neoprene gloves. Minimum nitrile thickness = 0.11 mm. Minimum neoprene thickness = 0.45 mm. Protective outer garment apron, sleeves as appropriate. Check manufacturer's recommendations.
Other:	Eyewash/shower unit in work area. Avoid the use of contact lenses in high fume/splash areas.
Work/Hygienic Practices:	Maintain good housekeeping. Clean up spills immediately. 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:	Clear liquid	Boiling Point:	Not available
Odor:	Odorless	Melting Point:	Not applicable
Specific Gravity:	1.53	pH:	Corrosive <1.5
Vapor Pressure:	Not applicable.	Solubility in Water:	Soluble
Vapor Density:	(air=1) heavier than air		

10. STABILITY AND REACTIVITY

General:	Stable.
Conditions to Avoid:	Extreme heat
Incompatible Materials:	Reacts violently with strong bases. Reactive metals, alkaline materials
Hazardous Decomposition / Combustion:	Can emit toxic phosphorus oxide/nitrogen oxide and ammonia at high temperatures.
Hazardous Polymerization:	Will not occur.
Hazardous Reactions:	Very corrosive to ordinary ferrous metals and alloys. Could form flammable and explosive hydrogen gas. Corrosive to metal.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity:	NTP: No	
	OSHA: No	
	IARC: No	
LD50: phosphoric acid: 3,500 oral rat		LC50: >1,260 inhalation rabbit
Irritancy of Product:	Fumes evolved during soldering may be irritating. Target organs: eyes, skin, respiratory system	
	RTECS: TB6300000	

12. ECOLOGICAL INFORMATION

Product not tested.

Very low pH solutions are expected to be harmful to aquatic organisms. Soluble in water, will disperse in aquatic systems.

Phosphoric acid:
 LC50 fish- 138 mg/kg 96h gambusia affinis
 EC50 Daphnia >100 mg/l

13. DISPOSAL CONSIDERATION

Waste Disposal Method: Dispose of in accordance with all Federal, State and Local environmental regulations. In Europe follow the European Waste Catalogue (EWC). Material is classified as corrosive. Do NOT dispose of to any sewers or any body of water.

14. TRANSPORT INFORMATION

Transport in accordance with applicable regulations and requirements.

UN1805, Phosphoric acid solution, 8, PG III



Emergency Guide Book: Guide # 154

Corrosive label

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).

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).

Complies with RoHS (2011/65/EU/RoHS2)

SARA 313 Listing - 40 CFR 372.65 - None

All ingredients are listed on the EPA TSCA Inventory.

CERCLA RQ: Phosphoric acid 5000 lbs

. 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

Revised Date: 7 NOVEMBER 2016
Prepared by: Nancy Swarts, Indium Corporation of America
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