



SAFETY DATA SHEET

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1 **Product Identifier:** INDALLOY FLUX 2

SDS Number: SDS- LF002

Revised Date: 15 FEBRUARY 2018

1.2 **Relevant identified uses of the substance or mixture and uses advised against**

Product Use: Industrial Use - FLUX- soldering applications-mixture

1.3 **Details of the supplier of the safety data sheet**

MANUFACTURER/SUPPLIER/IMPORTER:

In America:

The Indium Corporation of America®
34 Robinson Rd., Clinton, New York 13323
Technical & Safety Information: (315) 853-4900
Safety & SDS Information: nswarts@indium.com
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In Europe:

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Information: (86) 512-6283-4900

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

1.4 Emergency telephone number

FOR CHEMICAL EMERGENCY ONLY PHONE *:

CHEMTREC 24 hrs.

USA: 1 (800) 424-9300

Outside USA: +1 (703) 527-3887

*** Used only for spill/leak/fire/exposure/accident**

ALL OTHER INQUIRIES: TOLL FREE: +1-800-448-9240 Indium Corporation

SECTION 2. HAZARDS IDENTIFICATION**PRIMARY ROUTES OF ENTRY:**

Eye Inhalation Skin Ingestion NTP IARC OSHA Not Listed

Carcinogen listed in**2.1 Classification of the substance or mixture**

Classification according to the Regulation (EC) No. 1272/2008
 Skin corrosion (Category 1B)
 Serious eye damage (Category 1)

2.2 Labeling elements

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/vapours/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)

P310 Immediately call a POISON CENTER or doctor/physician

P405

Store locked up

2.3 OTHER HAZARDS:**POTENTIAL HEALTH EFFECTS:**

Eye Contact: Causes burns. Severely irritating to the eyes and if not promptly removed may result in serious eye injury.

Ingestion: May be harmful if swallowed. Corrosive. Causes burns to the mouth and throat.

Inhalation: May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory system. Irritating to respiratory tract.

Skin Contact: Causes skin irritation or burns. Material is corrosive to tissue.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS**3.2 Mixture:**

Components	CAS Registry #/EINECS#	
PHOSPHORIC ACID	40-65	7664-38-2/231-633-2
WATER	20	7732-18-5
ADDITIVES NON HAZARDOUS	15-40	-

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

SECTION 4. FIRST AID MEASURES**4.1 Description of 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.

4.2 Most important symptoms and effect, both acute and delayed:

Skin contact may cause irritation or burns. Eye exposure may cause serious burns.

4.3 Indication of any immediate medical attention and special treatment needed:

No specific special treatment information is available on this mixture. Review data provided in this document to understand the hazards when working with the product. No other information is available at this time. Seek medical attention if eye irritation continues after flushing or if burns to eyes. If respiratory discomfort is evident seek immediate medical advice.

SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing Media: Use extinguishers appropriate for the surrounding fire conditions. Water, CO2, foam media.

5.2 Special hazards arising from the substance or mixture:
May produce toxic oxide fumes if burning.

5.3 Advice for Firefighters Fire-fighters must wear approved self-contained breathing apparatus and full protective clothing. If involved in fire, Thermal decomposition may product toxic and irritating fumes and gases which may include phosphorus oxides, nitrogen oxides and ammonia.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

Keep away from the spill. Remove sources of ignition. Keep exhaust ventilation system running. In the event of a fire evacuate area.

For emergency responders:

Wear safety glasses, gloves when cleaning up any spill. Other equipment may be necessary based on the immediate area and other chemicals unrelated to the product that may be in use. Adequate ventilation should be available. Keep unnecessary personnel away from area during clean up. If on floor wear foot protection to avoid any direct contamination to shoes and boots. Avoid conditions that create fumes. Use an approved respirator with acid/particulate cartridge.

6.2 Environmental Precautions: Material has reclaim value. Recycle/recover/reuse value. If recycling cannot be done then dispose of material following all applicable governmental regulations. Material is corrosive.

6.3 Methods and material for containment and cleaning up:

Spill or leak procedures: Scope up and place into pail or drum and tightly cap.

6.4 Reference to other sections: See Section 8 for exposure levels.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions Keep containers tightly closed when not in use. Use care to avoid spills. Wear appropriate personal protective equipment (PPE) when working or handling material. Always thoroughly wash your hands after handling this product. DO NOT touch or rub eyes until hands are washed. Do not eat, drink or smoke when handling this product. Utilize exhaust ventilation during handling of this product.

Conditions for Safe Storage, including any incompatibilities:

Storage Precautions: Store product in tightly capped original containers in a cool, dry area. Refer to product label and product data sheet for specific storage temperature requirements. Rotate stock to ensure use before expiration date.

7.2 Specific End Use(s): Not specified.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control Parameters:

			<u>TWA</u>	<u>STEL</u>
			mg/m ³	mg/m ³
<u>CAS#/EINECS#</u>				
PHOSPHORIC ACID (ORTHOPHOSPHORIC ACID)	40-65	7664-38-2/231-633-2		
		(US)	1	3
		(EU)	-	2
		(Canada)	-	3
		(Singapore)	1	3
		(China)	-	3
		(Belgium)	-	2
		(Spain)	-	2
		(Italy)	-	2
		(Germany)	-	2
		(Portugal)	-	3
		(Finland)	-	2
		(Austria)	-	2
		(Denmark)	-	-
		(Poland)	-	2
		(Norway)	-	3
	(Estonia)	-	2	
	(Greece)	-	3	
	(Hungary)	-	2	
	(Sweden)	-	3	

		(France)		1	2
WATER	20	7732-18-5	N.E.	N.E.	N.E.
ADDITIVES	15-40	-	N.E.	N.E.	N.E.
NON HAZARDOUS					

TWA = TIME WEIGHTED AVERAGE

STEL = SHORT TERM EXPOSURE LEVEL

N.E. = Not established

8.2 Exposure Controls:

Engineering Controls: Local and/or Mechanical exhaust ventilation or point source exhaust is required to control any airborne contaminants and to reduce potential exposures to workers. Avoid inhalation of particulate/dust/spray. Use exhaust when there is any doubt in whether the operator/user is getting any exposure.

Personal protection:

Eyes: Chemical safety glasses/goggles. Face shield for splash/grinding/spray/dust hazard.

Respiratory: An approved air-purifying respirator (half or full face) with an acid/particulate cartridge may be required when concentrations are expected to be elevated.

Keep exposures to as low as possible. Unknown exposure should be measured to determine the proper protection.

Skin: Compatible chemical resistant gloves such as nitrile. Avoid direct skin contact.

Other: Lab coat, eye-wash fountain in work area. Avoid the use of contact lenses in high fume 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. Do not wear work clothes into lunchroom areas.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties:**

Appearance:	Clear Liquid	Boiling Point/Range:	Not available
Odor:	Slight Odor	Melting Point/Freezing Point:	Not available
Odor Threshold:	Not established	Evaporation Rate:	Not applicable
Specific Gravity:	Not available	pH:	Corrosive <1.5
Vapour Pressure:	Not data available	Solubility in Water:	Soluble
Vapour Density:	Heavier than air	Partition coefficient:	Not established
Relative Density:	Not established	Flammability:	Not applicable
Flash Point:	Not applicable	Method:	Not applicable
Auto-ignition Temperature:	Not applicable	Flammable Limits:	Limits not established
UEL/LEL Limits:	Not applicable	Decomposition Temp:	Not applicable
Viscosity:	Not established	Explosive properties:	Not applicable

Oxidizing Properties: Not established**VOC content:**

0%

SECTION 10. STABILITY AND REACTIVITY**10.1 Reactivity:** Corrosive vapours**10.2 Chemical Stability:** Stable**10.3 Possibility of Hazardous Reactions:** Not established**10.4 Conditions To Avoid:** Extreme heat**10.5 Incompatible Materials:** Avoid contact with strong bases. Reactive metals, alkaline materials**10.6 Hazardous Decomposition / Combustion:** Harmful toxic oxide fumes may form at elevated temperatures. Phosphorus oxide/nitrogen oxide and ammonia at high temperatures**Hazardous Polymerization:** Will not occur.**SECTION 11. TOXICOLOGICAL INFORMATION****11.1 Information on toxicological effects:****Acute toxicity:** Not established**Mutagenicity:**

Not established

Irritation: Not established**Toxicity for Reproduction:**

Not Established

Corrosivity: Corrosive**Absence of specific data:**

None available (not tested)

Sensitization: Not available**Repeated dose toxicity:** Not established**Carcinogenicity:** Not established**Likely Routes of Entry:** eyes (serious irritation/burns) /skin (burns/irritation)**Interactive effects:** None known**Symptoms related to the physical, chemical and toxicological characteristics:**

May cause irritation/burns by skin. Causes serious eye irritation/burns.

Delayed and immediate effects as well as chronic effects from short and long-term exposure:

Phosphoric acid: May cause damage to the following organs- blood, liver, skin, eyes, bone marrow

Mixture verses substance information: None known**Other Information:****Carcinogenicity:** NTP: No (National Toxicity Program)**Listing**

OSHA: No (US Occupational Safety & Health Administration)

IARC: No (U.N. International Agency for Research on Cancer)

RTECS: TB6300000

Product not tested.

Phosphoric acid:

Acute oral toxicity (LD50) – 3500 mg/kg (rat)

Acute dermal toxicity (LD50) – >1260 mg/kg (rabbit)

SECTION 12. ECOLOGICAL INFORMATION

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- 12.1 Toxicity:** No information available
- 12.2 Persistence and degradability:** No information available
- 12.3 Bioaccumulative potential:** No information available
- 12.4 Mobility in soil:** No information available
- 12.5 Results of PBT and vPvB assessments:** No data is available
- 12.6 Other adverse effects:** No information is available for mixture. Avoid release to environment.
- Phosphoric acid- LC 50 fish-138 mg/kg 96h *Gambusia affinis*
 EC50 *Daphnia* 1- >100 mg/l

SECTION 13. DISPOSAL CONSIDERATION

- 13.1 Waste treatment method:**
 Dispose of in accordance with environmental regulations. Containerize material and classify according to applicable regulations. No pre-treatment on site is recommended. Do not dispose of down any drain or waterway. Utilize the same personal protective equipment as the user when handling for disposal.
- RoHS 2 (Restriction of Hazardous Substances):** Compliant with RoHS. (2011/65/EU)

SECTION 14. TRANSPORT INFORMATION

Transport in accordance with applicable regulations and requirements.

Hazardous.

- 14.1 UN number: 1805**
- 14.2 UN proper shipping name:** Phosphoric Acid solution
- 14.3 Transport hazard class(s):** 8
- 14.4 Packing group:** III
- 14.5 Environmental hazards:** None
- Special precautions for user:** None

Transport in bulk: Not applicable



UN 1805, Phosphoric Acid Solution, 8, PG III

Marine Pollutant: No

SECTION 15. REGULATORY INFORMATION

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

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.).

All ingredients are listed on the USEPA TSCA Inventory.

All ingredients are listed on EINECS.

Safety data sheet was developed using EC 1907/2006 amended as of 20 May 2010 EU No 453/2010 and information as stated under regulation EC No 1272/2008 CLP Regulation.

GHS = Global Harmonized System

CLP= Classification, labeling and packaging

Product does not contain any substances ozone depleting substances and therefore not subject to EC 2037/2000.

15.2 Chemical safety assessment: None performed.

SECTION 16. OTHER INFORMATION

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

Revised Date: 15 FEBRUARY 2018

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Changes provided on this SDS were based on the requirements of EU No. 453/2010 of May 20, 2010 regarding amendments to EC No. 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).

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