



SAFETY DATA SHEET

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

1.1 Product Identifier: 2036 WAVE FLUX

SDS Number: SDS- HG4022

Revised Date: 19 NOVEMBER 2018

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

Product Use: Industrial Use - Non-activated Rosin Flux

1.3 Details of the supplier of the safety data sheet

MANUFACTURER/SUPPLIER/IMPORTER:

In America:

The Indium Corporation of America®
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Technical & Safety Information: (315) 853-4900
Safety & SDS Information: nswarts@indium.com
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1.4 Emergency Telephone Number

FOR CHEMICAL EMERGENCY ONLY PHONE *:
CHEMTREC 24 hrs.
USA: 1 (800) 424-9300
Outside USA: +1 (703) 527-3887
China: Emergency 86+ 4008417580
*** 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 mixture:**Classification:

Flammable Liquid – Category 2

Eye irritation – Category 2A

Specific target organ toxicity- single exposure – Category 3- central nervous system

Skin sensitization- Category 1B

Respiratory sensitization-Category 1B

2.2 Label elements

Labeling according to Regulation (EC) No. 1272/2008



Warning Word: Danger

Hazard statement(s)

H225 Highly flammable liquid and vapor
H317 May cause an allergic skin reaction
H319 Causes serious eye irritation
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335 May cause respiratory irritation
H336 May cause drowsiness or dizziness
EUH208 Contains rosin. May produce an allergic reaction

Precautionary statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking
P233 Keep container tightly closed
P240 Ground 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 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)

2.3 OTHER HAZARDS:

POTENTIAL HEALTH EFFECTS:

Eye Contact: Vapors may be irritating, liquid may damage eye tissue.

Ingestion: May cause persistent nausea, vomiting and abdominal pain.

Inhalation: Vapor may cause headaches and or dizziness. Prolonged or repeated exposure may cause respiratory sensitization. Rosin may cause occupational asthma.

Skin Contact: Prolonged contact may cause irritation and dermatitis. Prolonged exposure may cause skin sensitization in susceptible individuals.

Chronic: Not established.

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

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

3.2 Mixture:

Components	% wt	CAS Registry #/EINECS#
ISOPROPANOL (PROPAN-2-OL)	55-60	67-63-0/200-661-7
ROSIN	40-45	8050-09-7

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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/dermatitis.

Eye exposure may cause irritation.

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. If respiratory discomfort is evident seek medical advice.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing Media: Use extinguishers appropriate for the surrounding fire conditions. Foam, dry chemical, water spray. Product is flammable.

5.2 Special hazards arising from the substance or mixture:

May produce toxic fumes of carbon monoxide if burning.

5.3 Advice for Firefighters Fire fighters must wear approved self-contained breathing apparatus and full protective clothing.

No other information is available.

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. Use anti - static tools. Keep sources of ignition away.

6.2 Environmental Precautions: Dispose contaminated cloth rags or paper towels following all applicable governmental regulations. Material is flammable. May not have any reclaim value.

6.3 Methods and material for containment and cleaning up:

Spill or leak procedures: Absorb all liquids. Throw spill clean - up debris into metal container for proper disposal.

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

SECTION 7. HANDLING AND STORAGE

7.1 Precautions For Safe Handling: Keep containers tightly closed when not in use. Use care to avoid spills. Use only with production equipment specifically designed for use with flux. Wear appropriate personal protective equipment when working or handling flammable materials. 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 especially during heating product. General odor and chemical content require exhaust whenever the container is open. Ground containers and receiving equipment. Use spark resistant tools.

7.2 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. Keep away from sources of ignition.

7.3 Specific End Use(s): Soldering related applications

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control Parameters:

Components	% wt	<u>CAS#/EINECS#</u>	<u>TLV-TWA</u> mg/m ³	<u>TLV-STEL</u> mg/m ³
ISOPROPANOL PROPAN-2-OL	55-60	67-63-0 (US)	983	1225
		(UK)	999	1250
		FRANCE	980	-
		BELGIUM	997	1248
		SPAIN	998	1250
		PORTUGAL	200ppm	400ppm
		FINLAND	500	620
		DENMARK	490	-
		AUSTRIA	500	2000
		SWITZERLAND	500	1000
		POLAND	900	1200
		NORWAY	245	-
		IRELAND	200ppm (skin)	-
		GERMANY	500	1000
		BULGARIA	980	1225
		CROATIA	999	1250
		CZECH REPUBLIC	500	1000
		ESTONIA	350	600
		GREECE	980	1225
		HUNGARY	500	2000
		ICELAND	490	980
		LATVIA	350	600
		LITHUANIA	350	600

		ROMANIA	200	500
		RUSSIA	10	50 vapor
		SLOVAK REPUBLIC	200	500
		SLOVENIA	500	2000
		SWEDEN	350	600
ROSIN	40-45	8050-09-7(US)	N.E	N.E.
		(EU)	-	0.15

TWA = time weighted average STEL = short term exposure limit N.E. = Not established

8.2 Exposure Controls:

Engineering Controls: Face velocity >2.1 cubic feet/minute in confined areas. Recommend exhaust ventilation to reduce exposure to vapors.

Personal protection:

Follow requirements for proper equipment as outlined under 2016/425.

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.

Skin: Compatible CEN chemical resistant gloves such as nitrile, under EN 374.

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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance:	Amber	Boiling Point:	79 - 83C (175 - 182F)
Odor:	Alcohol odor.	Evaporation Rate:	1.7
Specific Gravity:	0.874 +/-0.005 @60F	pH:	Not available
Vapor Pressure:	33 mm HG @68°F	Solubility in Water:	Insoluble
Vapor Density:	2.1(air=1)	Partition coefficient:	Not established
Relative Density:	Not established	Flammability:	Not applicable
Flash Point:	12°C (54°F)	Method:	TCC
Auto-ignition Temperature:	None	Flammable Limits:	Upper: 12, Lower 2
UEL/LEL Limits:	Not established	Decomposition Temp:	Not applicable

Viscosity: Not established **Explosive properties:** Not applicable
Oxidizing Properties: Not established
9.2 Other Information: Above data for the whole mixture.

SECTION 10. STABILITY AND REACTIVITY

- 10.1 **Reactivity:** Stable.
10.2 **Chemical Stability:** Stable
10.3 **Possibility of Hazardous Reactions:** Not established
10.4 **Conditions To Avoid:** Direct heat, open flames and storage in aluminum.
10.5 **Incompatible Materials:** Avoid contact with phosphorus, halogens, anhydrides, monomers, aldehydes, trichlorides.
10.6 **Hazardous Decomposition /** carbon dioxide/carbon monoxide
Combustion: temperatures.
10.7 **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: Not applicable	Absence of specific data: None available (not tested)
Sensitization: Not available	
Repeated dose toxicity: Not established	
Carcinogenicity: Not established	

Likely Routes of Entry: eyes (irritation) /skin (irritation) /inhalation (irritation/ dizziness) ingestion (may be harmful)

Interactive effects: None known

11.2 Symptoms related to the physical, chemical and toxicological characteristics:

May cause irritation to eyes and by inhalation. Light headedness/dizzy.

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

May cause irritation, drowsiness by inhalation.

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)

SECTION 12. ECOLOGICAL INFORMATION

Product mixtures not tested.

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.
- Isopropyl alcohol: 4396 mg/kg (rat) LD50 oral/ 12800 mg/kg (rat) LD50 dermal/ 72.6 mg/l (rat) 4h LC50 inhalation.

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 (Restriction of Hazardous Substances): Compliant with RoHS.

SECTION 14. TRANSPORT INFORMATION

Transport in accordance with applicable international regulations and requirements.

Flux is hazardous.

- 14.1 UN Number** UN 1219
- 14.2 UN proper shipping name:** Isopropanol
- 14.3 Transport hazard class(s):** 3
- 14.4 Packing group:** II
- 14.5 Environmental hazards:** None
- 14.6 Special precautions for user:** None
- 14.7 Transport in bulk:** Not applicable



Shipping Name: UN 1987, Alcohols, N.O.S., 3, PG II (isopropanol, isobutyl alcohol)

SECTION 15. REGULATORY INFORMATION

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

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.).

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 6 February 2020 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 1005/2009.

15.2 Chemical safety assessment: None performed for mixture.

SECTION 16. OTHER INFORMATION

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

Revised Date: 19 NOVEMBER 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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