



SAFETY DATA SHEET

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

COMPANY/UNDERTAKING

1.1 Product Identifier: WAFERFLUX SC 5R

SDS Number: SDS-4570 **Revised Date:** 22 JUNE 2020
Version 1.1

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

Product Use: Industrial Use - Liquid flux - wafer bumping 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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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+ 4001-204937***** Used only for spill/leak/fire/exposure/accident****France: 33-975181407****In France emergency information (French poison center): INRS (ORFILA) +33 (0) 1 45 42 59 59****Germany: toll free- 0800-181-7059 or (Frankfurt) 49-69643508409****Italy: toll free- 800-789-767****Poland: (Warsaw) 48-223988029****Portugal: 351-308801773****Hungary: (Budapest) 36-18088425****Romania: 40-37-6300026****United Kingdom: (London) 44-870-8200418 and 44-2038073798****ALL OTHER INQUIRIES: TOLL FREE: +1-800-448-9240 Indium Corporation****SECTION 2. HAZARDS IDENTIFICATION****PRIMARY ROUTES OF ENTRY:**

⊗Eye

⊗Inhalation

⊗Skin

⊗Ingestion

NTP

Carcinogen listed in

IARC

OSHA

⊗Not Listed

2.1 Classification: Mixture

Flammable Liquid – Category 2

Eye irritation – Category 2A

Skin sensitization- Category 1B

Respiratory sensitization- Category 1B

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

2.2 Label elements:

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



Signal Word: Danger

Hazard statement(s)

H225 Highly flammable liquid and vapor

H317 May cause an allergic skin reaction

H319 Causes eye irritation

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled

H336 May cause drowsiness or 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

P242 Use only non-sparking tools

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

P301 +P312

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)

P362 +P364

Take off contaminated clothing and wash before reuse

Supplemental Information:

EUH208

Contains rosin. May produce an allergic reaction

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

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.

Ingestion: May cause irritation and damage to the mouth, esophagus and gastrointestinal tract.

Inhalation: Heated vapor concentrations may be harmful if inhaled. Irritating to respiratory tract. May cause headache or lightheadedness. Rosin may cause occupational asthma.

Skin Contact: May cause skin irritation. Allergic reactions are possible, especially with repeated or prolonged exposure.

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

Components	% wt	CAS Registry #
ROSIN	50-60	65997-05-9
ISOPROPYL ALCOHOL	40-50	67-63-0

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:

Rosin fume may cause respiratory irritation. May cause occupational asthma.

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.

SECTION 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. Material product is not flammable. 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.

6.2 Environmental Precautions: Avoid release to the environment.

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 Keep containers tightly closed when not in use. Use care to avoid spills. Wear appropriate personal protective equipment when working or handling product. 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 when heating product. Emissions contain metal fumes.

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.

7.3 Specific End Use(s): Soldering related applications.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control Parameters:

Components	% wt	CAS Registry #	TLV-TWA mg/m ³	TLV-STEL mg/m ³
ROSIN	50-60	65997-05-9	N.E.	N.E.
		(EU)	N.E.	0.15
ISOPROPYL ALCOHOL	40-50	67-63-0	983	1230
		(EU)	999	1250
		(Canada)	983	1228
		(Mexico)	980	1225
		(Singapore)	-	1230
		(China)	350	700

N.E. = Not established

EU = European Union Occupational Exposure Limits

8.2 Exposure Controls:

Engineering Controls: Exhaust point source ventilation should be sufficient to control airborne levels. Use ventilation.

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

Eye/face protection:

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection:

Handle with CEN approved disposable nitrile gloves (minimum layer thickness: 5 mil), EN 374 Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection:

The type of protective equipment must be selected according to the concentration and amount of any other substances used at the specific workplace. Handling of flux coated parts requires the use of gloves, eye protection and may require additional protection such as lab coat.

Respiratory protection:

Where risk assessment shows respirators are appropriate use a particle respirator type P100 (US) or half face respirator with multi-gas cartridges or type P3 (EN 143) respirator cartridges as a backup to engineering controls.

Work/Hygienic:

Maintain good housekeeping. Clean up spills immediately. Wash hands thoroughly with soap and water immediately upon leaving the work area and before eating. Refrain from eating or smoking in work areas.

Control of environmental exposure:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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

Appearance:	Liquid	Boiling Point/Range:	84 C (183 F)
Odor:	Slight characteristic odor.	Melting Point/Freezing Point:	Not determined
Odor Threshold:	Not established	Evaporation Rate:	Not applicable
Specific Gravity:	0.90	pH:	Not applicable
Vapour Pressure:	Not applicable.	Solubility in Water:	Not established
Vapour Density:	(air=1) Not applicable.	Partition coefficient:	Not established
Relative Density:	Not established	Flammability:	Not established
Flash Point:	11 C (52 F)	Method:	Not established
Auto-ignition Temperature:	Not applicable	Flammable Limits:	Limits not established. Flammable
UEL/LEL Limits:	Not applicable	Decomposition Temp:	Not applicable
Viscosity:	Not applicable	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:** High temperatures. Open flame.
- 10.5 Incompatible Materials:** Not established.
- 10.6 Hazardous Decomposition /Combustion:** Will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION**11.1 Information on toxicological effects:**

<u>Acute toxicity:</u>	Not established	<u>Mutagenicity:</u>	Not established
<u>Irritation:</u>	Contains rosin	<u>Toxicity for Reproduction:</u>	Not Established
<u>Corrosivity:</u>	Not applicable	<u>Absence of specific data:</u>	None available (not tested)
<u>Sensitization:</u>	Contains rosin which may cause sensitization.		

Repeated dose toxicity: No information available

Carcinogenicity: None

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

Interactive effects: None known

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

May cause irritation or harm by inhalation.

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

Mixture verses substance information: None known

11.3 Other Information:

Carcinogenicity: NTP: No (National Toxicity Program)
Listing OSHA: No (Occupational Safety and Health Administration)
 IARC: No (International Agency for Research on Cancer)

SECTION 12. ECOLOGICAL INFORMATION

Product mixture 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.

SECTION 13. DISPOSAL CONSIDERATION

13.1 Waste treatment method: Scrap metal alloy usually has value. Contact a commercial reclaimer for recycling. Otherwise, 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.

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 February 2020 EU No 2015/803 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 ozone depleting substances and therefore not subject to EC 1005/2009.

RoHS (Restriction of Hazardous Substances): Product complies

REACH – Substances of Very High Concern – complies.

15.2 Chemical safety assessment: None performed for mixture.

SECTION 16. OTHER INFORMATION

Revised Date:	22 JUNE 2020
Prepared by:	Nancy Swarts, Indium Corporation of America
Approved by:	Nancy Swarts, Indium Corporation of America

Changes provided on this SDS were based on the requirements of EU 2020/171 as of amendments February 6, 2020 regarding EC No. 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).

The information and recommendations contained herein are, to the best of The Indium Corporation of America's knowledge and belief, accurate and reliable as of the date issued. The Indium Corporation of America does not warrant or guarantee their accuracy or reliability, and The Indium Corporation of America shall not be liable for any loss or damage arising out of the user thereof. The information and recommendations are offered for the user's consideration and examination, and it is the user's responsibility to satisfy itself that they are suitable and complete for its particular use. If buyer repackages this product, legal counsel should be consulted to insure proper health, safety and other necessary information is included on the container.