



THE INDIUM CORPORATION OF AMERICA®\EUROPE®\ASIA-PACIFIC®
INDIUM CORPORATION (SUZHOU)®

SAFETY DATA SHEET

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

Product Identifier: WS-363
MSDS Number: MSDS- IN TF037
Revised Date: 8 NOVEMBER 2012
Product Use: Industrial Use (Mixture) –Tacflux.

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

MANUFACTURER/SUPPLIER/IMPORTER:

In America:

The Indium Corporation of America
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 Corporation web page: <http://www.indium.com>

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Indium Corporation of Europe
 7 Newmarket Ct.
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In Asia:

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 29 Kian Teck Avenue
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2. HAZARDS IDENTIFICATION**PRIMARY ROUTES OF ENTRY:**

Eye
 Inhalation
 Skin
 Ingestion
 NTP
 Carcinogen listed in IARC
 OSHA
Not Listed

Classification:

Risk Phrases: R36



Signal Word: Warning

Hazard statement(s)

H317 May cause an allergic skin reaction
 H319 Causes serious eye irritation

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 Take off contaminated clothing and wash before reuse
 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)

OTHER HAZARDS:**POTENTIAL HEALTH EFFECTS:**

- Eye Contact:** May cause eye irritation and if not promptly removed, may result in serious eye irritation. Do not allow material to come in contact with the eyes.
- Ingestion:** May cause irritation
- Inhalation:** May cause irritation to the respiratory system.
- Skin Contact:** May cause skin irritation or allergic skin reaction.

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

Components	% wt	CAS Registry #/ EINECS#
ALCOHOLS (c6-c12)	70-95	68603-15-6
CARBOXYLIC ACID	5 - 30	68937-72-4

THIS PRODUCT DOES NOT CONTAIN ANY EU REACH REPORTABLE SUBSTANCES OF VERY HIGH CONCERN (SVHC).

<http://www.indium.com>

4. FIRST AID MEASURES**Description of first aid measures:**

- Eye Contact:** Hold eyelids apart and flush eyes with plenty of 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.

Most important symptoms and effect, both acute and delayed:

Skin contact may cause sensitization.
Eye exposure may cause serious irritation.

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**Extinguishing Media:**

Use extinguishers appropriate for the surrounding fire conditions. Water, CO2, foam media.

Special hazards arising from the substance or mixture:

May produce toxic fumes of carbon monoxide if burning .

Advice for Firefighters

Firefighters must wear approved self-contained breathing apparatus and full protective clothing.

Material product is not flammable. No other information is available.

6. ACCIDENTAL RELEASE MEASURES**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.

Environmental Precautions: Dispose contaminated rags or absorbents following all applicable governmental regulations. Material is non-hazardous. May not have any reclaim value.

Methods and material for containment and cleaning up:

Spill or leak procedures: Using a spatula, scoop up flux and place into a plastic pail or drum and tightly cap.

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

7. HANDLING AND STORAGE**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 solder paste. 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 exhaust recommended when using the 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.

Specific End Use(s): Soldering applications

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters:

			<u>TWA</u>	<u>STEL</u>
		<u>CAS#/EINECS#</u>	mg/m3	mg/m3
ALCOHOLS (c6-c12)	70-95	68603-15-6	N.E.	N.E.
CARBOXYLIC ACID	5-30	68937-72-4	N.E.	N.E.

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

Exposure Controls:

Engineering Controls: Use only with adequate exhaust ventilation and other safety features specifically designed for chemical use. Use exhaust ventilation when using the product especially while heating product. Air emission control equipment may be necessary based on the local governmental requirements for contaminants entering the atmosphere.

Personal protection:

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

Respiratory: An approved or EU compliant CE marked air-purifying respirator with a fume/organic chemical cartridge is recommended under certain circumstances where airborne concentrations are expected to be elevated.

Skin: Compatible chemical resistant gloves. Recommend a nitril disposable or other chemical glove.

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. Do not allow wipes/rags to accumulate in the work area. 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

Information on basic physical and chemical properties:

Appearance:	Flux	Boiling Point/Range:	Not available
Odor:	Mild characteristic odor.	Melting Point/Freezing Point:	Not applicable
Odor Threshold:	Not established	Evaporation Rate:	Not applicable
Specific Gravity:	Not available	pH:	Not available
Vapour Pressure:	Not available	Solubility in Water:	Insoluble
Vapour Density:	(air=1) Not applicable.	Partition coefficient:	Not established
Relative Density:	Not established	Flammability:	Not applicable
Flash Point:	Not available	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		

Other Information: Above data for the whole mixture.

10. STABILITY AND REACTIVITY

<u>Reactivity:</u>	Stable.
<u>Chemical Stability:</u>	Stable
<u>Possibility of Hazardous Reactions:</u>	Not established
<u>Conditions To Avoid:</u>	Open flame
<u>Incompatible Materials:</u>	Avoid contact with acids, bases or oxidizing agents.
<u>Hazardous Decomposition / Combustion:</u>	Harmful organic fumes and toxic oxide fumes may form at elevated temperatures.
<u>Hazardous Polymerization:</u>	Will not occur.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects:

<u>Acute toxicity:</u>	Not established	<u>Mutagenicity:</u>	Not established
<u>Irritation:</u>	Not established	<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>	Not available		
<u>Repeated dose toxicity:</u>	Not established		
<u>Carcinogenicity:</u>	Not established for product.		
<u>Likely Routes of Entry:</u>	eyes (irritation) /skin (may cause irritation/sensitizer) /inhalation (may cause irritation)		
<u>Interactive effects:</u>	None known		

Symptoms related to the physical, chemical and toxicological characteristics:

May cause irritation by skin and eyes.

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

None known.

Mixture verses substance information: None known

Other Information:

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

12. ECOLOGICAL INFORMATION

This section is subject to future development. Product mixtures not tested.

Toxicity: No information available

Persistence and degradability: No information available

Bioaccumulative potential: No information available

Mobility in soil: No information available

Results of PBT and vPvB assessments: No data is available

Other adverse effects: No information is available for mixture. Avoid release to environment.

13. DISPOSAL CONSIDERATION

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. Non - hazardous flux.

RoHS (Restriction of Hazardous Substances): Compliant with RoHS.

14. TRANSPORT INFORMATION

Transport in accordance with applicable regulations and requirements.

Flux is non hazardous.

Not regulated/non hazardous under US DOT (United States Department of Transportation).

Not regulated/non hazardous under international shipping requirements.

UN proper shipping name: None

Transport hazard class(s): None

Packing group: None
Environmental hazards: None
Special precautions for user: None
Transport in bulk: Not applicable

15. REGULATORY INFORMATION

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. Note Rosin was recently listed under the No Longer Polymer List, Notification of New Chemical Substances in Accordance with Directive 67/548/EEC.

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.

Chemical safety assessment: None performed for mixture.

16. OTHER INFORMATION

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

Risk Phrases:

R36 Irritating to eyes

Safety Phrases:

S20/21 When using do not eat, drink or smoke

S23 Do not breathe fumes

S24/25 Avoid contact with skin and eyes

S27 Take off immediately all contaminated clothing

S28 After contact with skin wash immediately with plenty of soap and water

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection

S7 Keep container tightly closed

Revised Date: 8 NOVEMBER 2012

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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).

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.