



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

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: INDIUM #7 BIO-CLEANER

MSDS Number: MSDS-4425

Revised Date: 14 SEPTEMBER 2007

Product Use: Aqueous alkaline flux residue remover

MANUFACTURER:

In America:

The Indium Corporation of America
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Information: (315) 853-4900

EMERGENCY PHONE:

CHEMTREC 24 hrs.

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In Asia:

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Singapore 628908
Information: +65 6268-8678

2. COMPOSITION / INFORMATION ON INGREDIENTS

Components	% wt	CAS Registry #	PEL mg/m ³	TLV-TWA mg/m ³	TLV-STEL mg/m ³
GLYCOL ETHER	35-40	112-34-5	240 skin	20ppm	N.E.
		(EU)	-	20ppm	50ppm
ALKANOLAMINE	40-55	141-43-5(US)	6	7.5	15
		(Canada)	-	7.5	15
		(EU)	-	7.6	15
		(Singapore)	7.5	-	-

NON-IONIC
SURFACTANT

10-20

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N.E.

N.E.

N.E.

XI Risk Phrases: R36/37/38, R41
 N.E. = Not established EU = European Exposure Limits

3. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY:

Eye Inhalation Skin Ingestion NTP IARC OSHA Not Listed

Carcinogen listed in

POTENTIAL HEALTH EFFECTS:

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

Ingestion: May result in gastric disturbance. Contains an ingredient that may be toxic by ingestion.

Inhalation: May cause throat irritation

Skin Contact: May cause irritation. May cause burns to the skin. May be harmful if absorbed through the skin.

Chronic: Not established.

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

4. 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.

5. FIRE FIGHTING MEASURES

Flash Point: 145°F **Method:** Closed Cup

Auto-ignition Temperature: N/A

Flammable Limits: NA Combustible

Extinguishing Media: Dry chemical, Water or CO₂. Use extinguishers appropriate for the surrounding fire conditions.

Special Fire Fighting

Procedures: Wear protective clothing and self contained breathing apparatus. Use water to cool fire exposed containers. Flammable vapors may travel great distances to ignition source and flash back.

6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Do not allow material to enter sewer system or waterway. Check with local authority. Material has a high pH that may not be allowed for direct discharge. Wear personal protective equipment. Eliminate sources of ignition. Ventilate area in accordance with regulations. Dispose of following all Federal, State and Local regulations.

7. HANDLING AND STORAGE

Handling Precautions: Keep containers tightly closed when not in use. Use care to avoid spills. Wear personal protective equipment.

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

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Face velocity >2.1 cubic feet/minute in confined areas. Ventilation recommended. Recommend personal protective equipment, if ventilation equipment is not available or is not adequate.

Personal protection:

Eyes: Chemical safety glasses/goggles.

Respirator: A NIOSH approved or EU compliant CE marked air-purifying respirator with a fume/organic chemical cartridge is recommended where airborne concentrations are expected to be elevated or if working in confined spaces.

Skin: Compatible chemical resistant gloves. Use gloves, which are compatible with alkaline products.

Other: Lab coat, eyewash 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Light straw	Boiling Point:	329°F
Odor:	Ammonia like	Evaporation Rate:	ND
Specific Gravity:	0.965 @ 60° F	pH:	11
Vapor Pressure:	NA	Solubility in Water:	Soluble
Vapor Density:	NA	% Volatiles by volume:	90-92%

10. STABILITY AND REACTIVITY

General:	Stable.
Conditions to Avoid:	Direct heat, open flames
Incompatible Materials:	Strong oxidizing agents
Hazardous Decomposition / Combustion:	Carbon dioxide/carbon monoxide/ hydrogen bromide.
Hazardous Polymerization:	Will not occur.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity:	National Toxicity Program NTP:	No
	Occupational Safety & Health Administration OSHA:	No
	International Agency for Research on Cancer IARC:	No
LD50:	Not established.	LC50: Not established.

12. ECOLOGICAL INFORMATION

This section is subject to future development.

Biodegradability: Product is biodegradable flux remover. Alkaline in character.

Aquatic Toxicity: Contains an ingredient that is toxic to fish.

Product not tested.

WGK Germany (water hazard class) Class 1

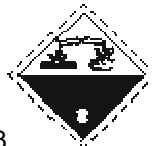
13. DISPOSAL CONSIDERATION

Waste Disposal Method: Dispose of in accordance with all Federal, State and Local environmental regulations.

14. TRANSPORT INFORMATION

Transport in accordance with applicable regulations and requirements.

UN2491, Ethanolamine, 8, PG III (mixture)



North America Emergency Guide: Guide 153

15. REGULATORY INFORMATION

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.).

The information in this Material Safety Data Sheet meets the requirements of the EU under Chemicals (Hazard Information and Packaging for Supply) Regulations 1994 (CHIP 2) Regulation 6.

This product has been classified in accordance with the hazard criteria of the Commission Directive 91/155/EEC and EH40.

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-2000 and NOM-010-STPS-1999.

This product has been classified using the Chinese Occupational Exposure Limit for Hazardous Agents in the Workplace, GBZ2-2002.

SARA 313 Listing - 40 CFR 372.65: glycol ether listed

All ingredients are listed on the EPA TSCA Inventory.

EC Classification, Packaging and Labeling Requirements:

Symbol and Hazard Classification of Product

Risk Phrases:

R36/37/38 Irritating to eyes, respiratory system and skin

R41 Risk of serious damage to eyes

Safety Phrases:

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

S24/25 Avoid contact with skin and eyes

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

S62 If swallowed, do not induce vomiting seek medical advice immediately and show container or label

S7 Keep container tightly closed

16. OTHER INFORMATION

HMIS Hazard Rating: **Health:** 2
 Fire: 1
 Reactivity: 0

Revised Date: 14 SEPTEMBER 2007

Prepared by: Nancy Swarts, Indium Corporation of America

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