



INDIUM CORPORATION OF AMERICA®/ EUROPE®/ ASIA PACIFIC®
INDIUM CORPORATION (SUZHOU)®
SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: INDIUM SULFIDE

SDS Number: SDS-IB013

Revised Date: 8 DECEMBER 2014

Product Use: Industrial use - Indium Sulfide (In_2S_3)

MANUFACTURER:

In America:

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Singapore 628908
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2. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY:

XEye XInhalation XSkin XIngestion

CARCINOGEN LISTED IN:

NTP IARC OSHA XNot Listed

GHS



Signal Word Warning

Hazard statement(s)

H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled
 H315 Cause skin irritation
 H319 Causes serious eye irritation
 H335 May cause respiratory irritation

Precautionary statement(s)

P233 Keep container closed
 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 Take off contaminated clothing and wash before reuse
 P301 + P314 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)

Classification:

Acute toxicity, Inhalation (Category 4)

Acute toxicity, Dermal (Category 4)

Acute toxicity, Oral (Category 4)

Skin irritation (Category 2)

Eye irritant (Category 2A)

Specific target organ toxicity – single exposure – Category 3, respiratory system

POTENTIAL HEALTH EFFECTS:

Eye Contact: May cause severe irritation and possible burns.

Ingestion: Harmful if swallowed. May cause burns to the gastrointestinal tract. Kidney and liver damage from injected indium compounds has been reported based on limited animal testing.

Inhalation: Harmful if inhaled. May cause respiratory irritation. Severe exposure could cause pulmonary damage. Inhalation may cause lung edema. The symptoms may be aggravated by physical effort.

Skin Contact: May cause skin irritation or burns.

Chronic: Kidney and liver damage from injecting indium compounds has been reported based on limited animal testing but no systematic effects from human exposure has been reported.

Other: Hygiene practices should be in place when handling this product. Avoid breathing dust. Pregnant

women should take measures to avoid exposure.

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

Warning: This product contains a chemical known to the State of California to cause cancer and/or birth defects (or other reproductive harm). (Trace impurities of lead).

3. COMPOSITION / INFORMATION ON INGREDIENTS

Components	% wt	CAS Registry #EINECS	PEL mg/m ³	TLV-TWA mg/m ³	TLV-STEL mg/m ³
INDIUM SULFIDE	100	12030-24-9/234-742-3	0.1 (as Indium*)	0.1	N.E.
		(EU)	-	0.1 (as Indium)	0.3
		(Canada)	-	0.1 (as Indium)	0.3
		(Mexico)	0.1 (as Indium)	-	0.3
		(Singapore)	0.1 (as Indium)	-	-
		(China)	-	0.1(as indium)	0.3

N.E. = Not established SYMBOL: X_n RISK PHRASES: R20/21/22, R36/37/38 * Indium CAS# 7440-74-6

PRODUCT DOES NOT CONTAIN ANY EU SUBSTANCES OF VERY HIGH CONCERN (SVHC)

4. 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.

5. FIRE FIGHTING MEASURES

- Flash Point:** Not established. **Method:** Not established.
- Auto-ignition Temperature:** Not established.
- Flammable Limits:** Limits not established. Not flammable.
- Extinguishing Media:** Use extinguishers appropriate for the surrounding fire conditions.
- Special Fire Fighting** Firefighters must wear NIOSH approved or equivalent self-contained breathing

Procedures: apparatus and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Isolate spill and clean up with vacuum. Avoid conditions, which create fumes or fine dust. DO NOT SWEEP SOLIDS. Do not raise dust levels. Place material in proper waste container. An approved air purifying respirator with particulate cartridge and other personal protective equipment such as gloves is recommended. Dispose of in accordance with Federal, State and Local regulations. In Europe dispose of following the Special Waste Regulations. Indium may have reclaim value.

7. HANDLING AND STORAGE

Handling: Keep containers tightly closed when not in use. Use care to avoid spills. Wear appropriate personal protective equipment. Always thoroughly wash your hands after handling this product. DO NOT touch or rub eyes until hands are washed.

Storage Precautions: Store product in tightly capped original containers in a cool, well ventilated and dry area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Local and/or Mechanical (general) exhaust ventilation is recommended to control any air contaminants.

Personal protection:

Eyes: Wear chemical safety glasses/goggles. Face shield for splash hazards.

Respirator: A NIOSH approved air-purifying respirator with a particulate filter is recommended under certain circumstances where airborne concentrations are expected to be elevated.

Skin: Gloves are recommended when handling solids.

Other: Lab coat, apron, eyewash fountain in work area. Avoid the use of contact lenses in high fume areas.

Work/Hygienic 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:	Red-orange powder	Boiling Point:	Sublimes @850C in high vacuum
Odor:	Heavy sulfur odor	Melting Point:	1050C
Specific Gravity:	4.90 (H ₂ O=1)	pH:	Not applicable
Vapor Pressure:	183.8C = S at 1mm Hg	Solubility in Water:	Slightly soluble in Na ₂ S Insoluble in water
Vapor Density:	Not applicable	Molecular Weight:	325.82

10. STABILITY AND REACTIVITY

General:	Stable.
Conditions to Avoid:	Not established.
Incompatible Materials:	Strong acids
Hazardous Decomposition /	Toxic fumes (H ₂ S) may form at elevated temperatures.
Combustion:	Deliquescent, hydrolyzes to form In (OH) ₃
Hazardous Polymerization:	Will not occur.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity:	National Toxicology Program (NTP):	No
	Occupational Safety & Health Administration (OSHA):	No
	U.N. International Agency for Research on Cancer (IARC):	No
LD50:	No information available	
Irritancy of Product:	May be an irritant	Mutagenicity: Not established
Sensitization to Product:	Not established	Teratogenicity: Not established
Reproductive Toxicity:	Not established	Synergistic Products: Not established

12. ECOLOGICAL INFORMATION

Biodegradability: Data not established.

Aquatic Toxicity: Data not established.

13. DISPOSAL CONSIDERATION

Waste Disposal Method: Scrap indium metal may have some value. Contact a commercial reclaimer for recycling. Otherwise, dispose of in accordance with all Federal, State and Local environmental regulations. In Europe follow the Special Waste Regulations.

14. TRANSPORT INFORMATION

Transport in accordance with applicable regulations and requirements. Not regulated under the Department of Transportation.

UN - none

North America Emergency Guide Book – Not listed

15. REGULATORY INFORMATION

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.).

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation

(CPR).

WHMIS: Insufficient data available at this time.

This product is classified in accordance with the Mexican regulations, NOM-018-STPS-2000 and NOM-010-STPS-1999.

California Prop 65: Warning: This product contains a chemical known to the State of California to cause cancer and/or birth defects (or other reproductive harm). (Trace levels of impurities: lead).

Swiss Poison Class: 4

This product has been classified in accordance with the guidelines, as set, by the Dept of Industrial Health of the Republic of Singapore.

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: None

All ingredients are listed on the EPA TSCA Inventory and Canadian Domestic Substance List.

EC Classification, Packaging and Labeling Requirements:
Symbol and Hazard Classification of Product X_n

Risk Phrases:

R20/21/22 Harmful by inhalation, in contact with skin and if swallowed

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

Safety Phrases:

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

S24/25 Avoid contact with skin and eyes

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

16. OTHER INFORMATION

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

Revised Date: 8 DECEMBER 2014

Prepared by: Nancy Swarts, Indium Corporation of America

Approved by: Nancy Swarts, Indium Corporation of America

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