



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

**SAFETY DATA SHEET**

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Identifier:** INDIUM OXIDE

**SDS Number:** SDS-IB010

**Revised Date:** 8 MAY 2017

**Product Use:** Industrial Use - Indium Oxide, In<sub>2</sub>O<sub>3</sub>

**MANUFACTURER:**

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## 2. HAZARDS IDENTIFICATION

**PRIMARY ROUTES OF ENTRY:**

\*Eye      \*Inhalation      \*Skin      \*Ingestion      NTP

**CARCINOGEN LISTED IN:**

IARC      OSHA      \*Not Listed

GHS



Symbol - Warning

**Hazard statement(s)**

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 + P364      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)

Eye irritant (Category 2A)  
 Specific target organ toxicity – single exposure (Category 3) respiratory system

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**Eye Contact:**      Causes serious eye irritation.

**Ingestion:**      May be harmful if swallowed.

**Inhalation:**      May cause irritation.

**Skin Contact:**      May cause skin irritation.

**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.

**Note:**      **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 levels of lead, not intentionally added).**

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

Components	% wt	CAS Registry #/EINECS
INDIUM OXIDE (diindium trioxide)	100	1312-43-2/215-193-9
In <sub>2</sub> O <sub>3</sub>		
277.63 g/mol – molecular weight		
N.E. = Not established		
* Indium CAS# 7440-74-6 EINECS# 215-193-9		

**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. Water spray, alcohol resistant foam, dry chemical.
- Special Fire Fighting Procedures:** Firefighters must wear NIOSH approved or equivalent self-contained breathing 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 has 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

Components	% wt	CAS Registry #/EINECS	PEL mg/m <sup>3</sup>	TLV-TWA mg/m <sup>3</sup>	TLV-STEL mg/m <sup>3</sup>
INDIUM OXIDE	100	1312-43-2/215-193-9	0.1 (as Indium*)	0.1	N.E.
		(EU)	N.E.	0.1 (as Indium)	0.3
		(Canada)	N.E.	0.1 (as Indium)	0.3
		(Singapore)	0.1(as indium)	-	-
		(Mexico)	-	0.1(as indium)	0.3
		(China)	-	0.1(as indium)	0.3

\* Indium CAS# 7440-74-6 EINECS# 215-193-9

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

**Personal protection:**

**Eyes:** Wear chemical safety glasses/goggles.

**Respirator:** An authority 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/dust 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

<b>Appearance:</b> Yellow solid powder	<b>Boiling Point:</b> 850 C (1562 F) volatilizes
<b>Odor:</b> Odorless	<b>Melting Point:</b> 1910 C + 10 C (3470 F + 50 F)
<b>Specific Gravity:</b> 7.179 (H <sub>2</sub> O=1)	<b>pH:</b> Not applicable
<b>Vapor Pressure:</b> <0.01 MM @25C	<b>Solubility in Water:</b> Insoluble
<b>Vapor Density:</b> Not applicable	<b>Molecular Weight:</b> 277.64

### 10. STABILITY AND REACTIVITY

<b>General:</b>	Stable.
<b>Conditions to Avoid:</b>	Not established.
<b>Incompatible Materials:</b>	Strong oxidizing agents
<b>Hazardous Decomposition / Combustion:</b>	Toxic fumes may form at elevated temperatures. Indium / indium oxides As always dust accumulation should be minimized.
<b>Hazardous Polymerization:</b>	Will not occur.

## 11. TOXICOLOGICAL INFORMATION

<b>Carcinogenicity:</b>	<b>National Toxicology Program (NTP):</b>	No
	<b>Occupational Safety &amp; Health Administration (OSHA):</b>	No
	<b>U.N. International Agency for Research on Cancer (IARC):</b>	No
<b>LD50:</b>	Oral rodent-rat >10 gm/kg * See NIOSH RTECS# NL1770000 (indium)	
<b>Irritancy of Product:</b>	Irritant	
<b>Specific target organ toxicity – single exposure:</b>	Inhalation	

## 12. ECOLOGICAL INFORMATION

Product not tested.

## 13. DISPOSAL CONSIDERATION

**Waste Disposal Method:** Scrap indium metal has 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 US Department of Transportation or any other modes of transport.  
 UN - none  
 Marine Pollutant: No  
 North American Emergency Guide Book – Not applicable

## 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.).

SARA 313 listing - 40 CFR 372.65: None

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 lead not intentionally added).

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

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 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: Malaysian – OCCUPATIONAL SAFETY AND HEALTH (CLASSIFICATION, LABELING AND SAFETY DATA SHEET OF HAZARDOUS CHEMICALS) REGULATION OCTOBER 2013 – (CLASS).

Regulatory Information China:

GB/T 16483-2008, GB/T 17519-2013, Safety Data Sheets for Chemical Products

GB 30000.2-29-2013, Rules for classification and labeling of chemicals (GHS)

Decree No. 591: Regulations on the Control Over Safety of Hazardous Chemicals.

This product has been classified using the Chinese Occupational Exposure Limit of Hazardous Agents in the Workplace, GBZ2-2007.

This product has been classified in accordance with the Mexican regulations NOM-018-STPS-2015 and NOM-010STPS-2014.

## 16. OTHER INFORMATION

<b>HMIS Hazard Rating:</b>	<b>Health:</b>	1
	<b>Fire:</b>	0
	<b>Reactivity:</b>	0

**Revised Date:** 8 MAY 2017

**Prepared by:** Nancy Swarts, Indium Corporation of America

**Approved by:** Nancy Swarts, Indium Corporation of America

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Note: This SDS may be translated into an international language. If there is any misinterpretation or misunderstanding of any words or phrases that may occur within any translation the ENGLISH language shall always prevail.