

# MATERIAL SAFETY DATA SHEET

## Chemical Product

Product Name: INDIUM OXIDE  
CAS#: 1312-43-2

Synonym: Indium Trioxide; Indium (III)  
Oxide; Diindium Trioxide; Indium Sesquioxide

Chemical Name: Indium Oxide  
Chemical Formula:  $\text{In}_2\text{O}_3$

## Composition and Information on Ingredients

Name	S.K.U	% by Weight
INDIUM OXIDE	GCS-3137	100

## Hazards Identification

### Potential Acute Health Effects:

Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation (lung corrosive).

### Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available.

TERATOGENIC

EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. Repeated or prolonged exposure is not known to aggravate medical condition.

## First Aid Measures

### Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

### Skin Contact:

Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact: Not available.

### Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

**Ingestion:**

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

**Fire and Explosion Data**

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not available.

**Explosion Hazards in Presence of Various Substances:**

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions: Not available.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

**Accidental Release Measures**

**Small Spill:**

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

**Large Spill:**

Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

**Handling and Storage**

#### Precautions:

Do not ingest. Do not breathe dust. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as acids.

#### Storage:

Keep container tightly closed. Keep container in a cool, well-ventilated area.

### Exposure Controls/Personal Protection

#### Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

#### Personal Protection:

Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

#### Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: TWA: 0.1 (mg/m<sup>3</sup>) Consult local authorities for acceptable exposure limits.

### Physical and Chemical Properties

#### Physical state and appearance: Solid.

Odor	: Odorless.
Taste	: Not available.
Molecular Weight	: 277.64 g/mole
Color	: Off-White to yellowish.
pH (1% soln/water)	: Not available.
Boiling Point	: Not available.
Melting Point	: Not available.
Critical Temperature	: Not available.
Specific Gravity	: Not available.
Vapor Pressure	: Not applicable.
Vapor Density	: Not available.
Volatility	: Not available.
Odor Threshold	

: Not available.

Water/Oil Dist. Coeff.

: Not available.

Ionicity (in Water)

: Not available.  
Dispersion Properties

: See solubility in water.  
Solubility

: Insoluble in cold water, hot water.

## Stability and Reactivity Data

Stability: The product  
is stable.

Instability

Temperature:

Not available.

Conditions of

Instability:

Not available.

Incompatibility with various substances: Extremely reactive or incompatible with oxidizing agents.

Corrosivity: Non-corrosive in  
presence of glass.

Special Remarks on

Reactivity: Not available.

Special Remarks on

Corrosivity: Not available.

Polymerization: No.

## Toxicological Information

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50) : >10000 mg/kg [Rat].

Chronic Effects on Humans: Not available.

#### Other Toxic Effects on Humans:

Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation (lung corrosive).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

#### Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: Causes skin irritation. Eyes: Causes eye irritation. Inhalation: May cause respiratory tract irritation. Ingestion: May cause digestive tract irritation. Chronic Potential Health Effects: Ingestion: Prolonged or repeated inhalation may affect the blood, metabolism, and may cause liver and kidney damage.

Toxicological Data on Ingredients: Indium Oxide, 99.99%: ORAL (LD50): Acute: >10000 mg/kg [Rat].

### Ecological Information

Toxicity

No data available

BOD5 and COD: Not available.

Products of Biodegradation: Possibly hazardous short/long term degradation products are to be expected.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available

### Disposal Considerations

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

### Transformation Information

Land transport (ADR-RID)

General  
information: Not regulated

Sea transport (IMDG) [English only]  
General information: Not regulated

Air transport (ICAO-IATA) [English only]  
General information: Not regulated

## Other Regulatory Information

Federal and State Regulations: TSCA 8(b) inventory: Indium Oxide, 99.99% TSCA 8(a)  
PAIR: Indium Oxide, 99.99%

### Other Regulations:

EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

### Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC): R36- Irritating to eyes. S24/25- Avoid contact with skin and eyes. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

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

### HMIS (U.S.A.):

Health Hazard: 2

### Fire Hazard: 1

Reactivity: 0

### Personal Protection: E

National Fire Protection Association (U.S.A.):

### Health: 2

Flammability: 1

### Reactivity: 0

Specific hazard:

### Protective Equipment:

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

## Additional Information



References: Not available.

Other Special Considerations: Not available.

## ***Disclaimer:***

\*\*\*\*\*

The information contained herein in good faith but makes no representations as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

 **makes no representations or warranties, either express or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly,  will not be responsible for damages resulting from use of or reliance upon this information.**