

# MATERIAL SAFETY DATA SHEET

## SECTION 1 - IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Material Name:** Indium trichloride  
**Catalogue Number:** C112  
**Other Names:** InCl<sub>3</sub> powder  
**Recommended Use:** Laboratory reagent/ Metal stain.

**Supplier Name:** ProSciTech Pty Ltd  
**Street Address:** 11 Carlton Street, Kirwan QLD 4817 Australia  
**Telephone Number:** (07) 4773 9444 - 8:30am – 5:00pm, Monday to Friday (excluding Public Holidays)  
**Emergency Contact:** (07) 4773 9444 - 8:30am – 5:00pm, Monday to Friday (excluding Public Holidays)

## SECTION 2 - HAZARDS IDENTIFICATION

### Hazard Classification:

Hazardous according to the criteria for Classifying Hazardous Substances [NOHSC:1008].

### Hazardous and/or Dangerous Nature:

HAZARDOUS SUBSTANCE. DANGEROUS GOODS.

### 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.

## SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

### Pure Substance (Proportion 100%):

**Chemical Identity:** Indium trichloride  
**Common Name(s):** InCl<sub>3</sub> powder  
**CAS Number:** 10025-82-8

## SECTION 4 - FIRST AID MEASURES

**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.

**Eye Contact:** Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Seek medical attention if irritation persists.

**Skin Contact:** Remove contaminated clothing. Wash affected area with soap and water. Wash clothing before reuse. If irritation persists, obtain medical attention.

**First Aid Facilities:** Eyebath/eyewash, Safety shower & general washroom facilities.

### Medical Attention & Special Treatment:

Treat symptomatically and supportively.

## SECTION 5 - FIRE FIGHTING MEASURES

### Suitable Extinguishing Media:

Use extinguishers appropriate for the surrounding fire conditions.

### Hazards from Combustion Products:

Toxic chlorine fumes may form when heated to decomposition. May release toxic fumes. Combustion - deliquescent, hydrolyses to form In (OH)<sub>3</sub>.

### Precautions for Fire Fighters:

Fire-fighters must wear NIOSH approved or equivalent self-contained breathing apparatus and full protective clothing.

**Hazchem Code:** Not available.

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

**Containment & Clean up:** Wear appropriate protective equipment – refer to Section 8. 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.

## SECTION 7 - HANDLING & STORAGE

### Precautions for Safe 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. Hygiene practices should be in place when handling this product. Avoid breathing dust. Pregnant women should take measures to avoid exposure.

### Precautions for Safe Storage:

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

## SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

**National Exposure Standards:** Indium trichloride: Cas no.10025-82-8 – TWA 0.1mg/m<sup>3</sup>  
Indium & compounds (as In): Cas no.7440-74-6 – PEL 0.1 mg/m<sup>3</sup>

### Engineering Controls:

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

### Personal Protective Equipment:

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

**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 or dusty 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.

## SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES

<b>Appearance:</b>	White flakes/powder.
<b>Odour:</b>	Odourless.
<b>pH:</b>	Not applicable (Corrosive).
<b>Vapour pressure:</b>	Not applicable.
<b>Vapour density:</b>	Not applicable.
<b>Boiling point/range:</b>	600°C volatile
<b>Freezing/melting point:</b>	486°C (sublimes at 300°C)
<b>Solubility:</b>	Soluble in water.
<b>Specific gravity or density:</b>	3.46 (H <sub>2</sub> O = 1)
<b>Flash Point:</b>	Not established.
<b>Flammable Limits:</b>	Limits not established. Not flammable.
<b>Auto-ignition Temperature:</b>	Not established.
<b>Molecular Weight:</b>	221.18
<b>Chemical Formula:</b>	InCl <sub>3</sub>

## SECTION 10 - STABILITY AND REACTIVITY

**Chemical stability:** Stable under normal conditions of use.

**Conditions to avoid:** Dust generation, and incompatible materials.

**Incompatible Materials:** Strong acids.

### Hazardous Decomposition Products:

Toxic chlorine fumes may form when heated to decomposition. May release toxic fumes. Deliquescent, hydrolyses to form In (OH)<sub>3</sub>

**Hazardous Reactions:** Will not occur.

## SECTION 11 - TOXICOLOGICAL INFORMATION

### Exposure and Health Effects:

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.

### 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:

May cause respiratory irritation. Severe exposure could cause pulmonary damage. Inhalation may cause lung oedema. The symptoms may be aggravated by physical effort.

**Eye Contact:**

May cause severe irritation and possible burns.

**Skin Contact:**

May cause skin irritation or burns.

**Human/Animal data:** No information found.

**Carcinogenic Category:** No data available to classify Carcinogenic Category.

**Other Carcinogenic Information:** No information found.

<b>SECTION 12 – ECOLOGICAL INFORMATION</b>
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**Ecotoxicity:** No information found.

**Persistence and degradability:** No information found.

**Mobility:** No information found.

<b>SECTION 13 - DISPOSAL CONSIDERATIONS</b>
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**Disposal Methods:** 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.

<b>SECTION 14 - TRANSPORT INFORMATION</b>
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**UN Number:** UN3260

**UN Proper Shipping Name:** Corrosive Solid, Acidic, Inorganic, N.O.S. (indium trichloride)

**Class and Subsidiary risk:** 8

**Packing Group:** II

<b>SECTION 15 - REGULATORY INFORMATION</b>
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**Poison Schedule Number:** None Allocated.

<b>SECTION 16 - OTHER INFORMATION</b>
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**Date of preparation of MSDS:** 29 May 2012

**Comments:****List of Publications referenced when creating this MSDS;**

- Hazardous Substances Information System Consolidated Lists: Safe Work Australia.
- APPROVED CRITERIA FOR CLASSIFYING HAZARDOUS SUBSTANCES [NOHSC:1008(2004)] 3rd Edition: National Occupational Health and Safety Commission.
- Dangerous Goods - Initial Emergency Response Guide (SAA/SNZ HB76:1997).
- IATA Dangerous Goods Regulations.
- Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)].
- Australia Standard for the Uniform Scheduling of Drugs and Poisons [SUSPD] (Australian Government Department of Health and Ageing).

*This Material Safety Data Sheet (MSDS) has been prepared in compliance with the National code of Practice for the Preparation of Material Safety Data Sheets 2<sup>nd</sup> Edition [NOHSC:2011(2003)]. It is the user's responsibility to determine the suitability of this information for adoption of necessary safety precautions. The information published in this MSDS has been compiled from the publications listed in Section 16: to the best of our ability and knowledge these publications are considered accurate. We reserve the right to revise Material Safety Data Sheets as new information becomes available. Copies may be made for non-profit use.*

**... End of MSDS ...**