



Material Safety Data Sheet
Indium(III) oxide, 99.999%

MSDS# 98831

Section 1 - Chemical Product and Company Identification

MSDS Name: Indium(III) oxide, 99.999%
Catalog Numbers: AC315740000, AC315740050
Synonyms: Diindium trioxide; Indium sesquioxide.

Company Identification: Acros Organics BVBA
Janssen Pharmaceuticaaan 3a
2440 Geel, Belgium

Company Identification: (USA) Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call: 800-ACROS-01
For information in Europe, call: +32 14 57 52 11
Emergency Number, Europe: +32 14 57 52 99
Emergency Number US: 201-796-7100
CHEMTREC Phone Number, US: 800-424-9300
CHEMTREC Phone Number, Europe: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#: 1312-43-2
Chemical Name: Indium(III) oxide
%: 99.999
EINECS#: 215-193-9

Hazard Symbols: None listed
Risk Phrases: None listed

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Warning! May cause lung damage. May cause blood abnormalities. Long-term exposure may cause bone and joint changes. May cause eye, skin, and respiratory tract irritation. Target Organs: Blood, lungs, gastrointestinal system, bone.

Potential Health Effects

Eye: May cause eye irritation.

Skin: May cause skin irritation.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

Inhalation: May cause respiratory tract irritation. May cause pulmonary edema and severe respiratory disturbances. May cause lung damage.

Chronic: The lungs of rats exposed daily to In₂O₃ at concentrations from 24-97 mg/m³ for a total of 224 hrs showed evidence of widespread alveolar edema, which differs from the usual toxic edema fluid by being granular and containing a few alveolar phagocytes, polymorphonuclear cells, & nuclear debris. The injury was further characterized by alteration of the alveolar walls by spindle-shaped & other type cells. The lesion showed little change either during exposure or after a 12-week postexposure period, & no fibrosis resulted from the healing process. Thus, In₂O₃ dust uniquely produces a widespread alveolar stasis resembling alveolar proteinosis in which alveolar clearance is reduced. Associated chronic respiratory insufficiency, recurrent acute pneumonitis, or complicating infections may result in a fatal outcome.

Section 4 - First Aid Measures

Eyes:	Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
Skin:	Get medical aid if irritation develops or persists. Flush skin with plenty of soap and water.
Ingestion:	If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.
Inhalation:	Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to
Physician:

Section 5 - Fire Fighting Measures

General Information:	As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products.
Extinguishing Media:	Use extinguishing media most appropriate for the surrounding fire.
Autoignition Temperature:	Not available
Flash Point:	Not available
Explosion Limits: Lower:	Not available
Explosion Limits: Upper:	Not available
NFPA Rating:	health: 2; flammability: 0; instability: 0;

Section 6 - Accidental Release Measures

General Information:	Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks:	Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling:	Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Avoid breathing dust.
Storage:	Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Indium(III) oxide	0.1 mg/m3 TWA (as In) (listed under Indium compounds, n.o.s.).	0.1 mg/m3 TWA (as In) (listed under Indium compounds, n.o.s.).	none listed

OSHA Vacated PELs: Indium(III) oxide: 0.1 mg/m3 TWA (as In) (listed under Indium compounds, n.o.s.)

Engineering Controls:

Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Exposure Limits

Personal Protective Equipment

Eyes:	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin:	Wear appropriate protective gloves to prevent skin exposure.
Clothing:	Wear appropriate protective clothing to minimize contact with skin.

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a Respirators: NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Powder

Color: white

Odor: Not available

pH: Not available

Vapor Pressure: Not available

Vapor Density: Not available

Evaporation Rate: Not available

Viscosity: Not available

Boiling Point: 850 deg C (1,562.00°F)

Freezing/Melting Point: Not available

Decomposition Temperature: Not available

Solubility in water: Insoluble

Specific Gravity/Density:

Molecular Formula: In₂O₃

Molecular Weight: 277.64

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Dust generation.

Incompatibilities with Other Materials: No significant incompatibilities identified with common materials and contaminants..

Hazardous Decomposition Products: No data available.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#: CAS# 1312-43-2: NL1770000

LD50/LC50: RTECS: Not available. Other: Oral mouse LDLo: 10 g/kg.

Carcinogenicity: Indium(III) oxide - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Not available

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: Not regulated

Hazard Class:

UN Number:

Packing Group:

Canada TDG

Shipping Name: Not available

Hazard Class:

UN Number:

Packing Group:

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:Not available

Risk Phrases:

Safety Phrases:

S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)

CAS# 1312-43-2: Not available

Canada

CAS# 1312-43-2 is listed on Canada's DSL List

Canadian WHMIS Classifications: Not available

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 1312-43-2 is not listed on Canada's Ingredient Disclosure List.

US Federal

TSCA

CAS# 1312-43-2 is listed on the TSCA
Inventory.

Section 16 - Other Information

MSDS Creation Date: 9/02/1997

Revision #6 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.
