

MATERIAL SAFETY DATA SHEET

Stanford Advanced Materials

SECTION 1 - IDENTIFICATION

Product Name: Indium Tin Oxide
Synonyms: None known
Chemical Family: Metal Oxide Blend
CAS#: 50926-11-9
Molecular formula: 91 mol.% In₂O₃/9 mol.% SnO₂

SECTION 2 - INGREDIENTS

Chemical:	Indium Tin Oxide			
CAS#	%	PEL	TLV	
Indium (III) Oxide				
1312-43-2	90%	n/a	.1 mG/M3	(as In)
Tin (IV) Oxide				
18282-10-5	10%	n/a	2 mG/M3	(as Sn)

SECTION 3 - PHYSICAL DATA

Boiling Point: not determined
% Volatiles: 0
Solubility in Water: Insoluble
Specific Gravity: not determined
Freezing/Melting Point: Approx 1500 C
Evaporation Rate (butyl acetate = 1): 0
Vapor Density: Not Applicable
Vapor Pressure: Not Applicable
Appearance and odor: White to pale yellow pieces
Other: No data

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

Flash Point: None
Flammable Limits in Air, Low: Not applicable
High: Not applicable
Auto-ignition Temperature: None

Extinguishing Media:

Product is not flammable. Use fire fighting techniques that suit the surrounding fire.

Protective Equipment:

Use normal firefighting procedures which include wearing NIOSH/MSHA approved self-contained breathing apparatus, flame and chemical resistant clothing, hats, boots, and gloves.

SECTION 5 - HEALTH DATA

OSHA (PEL): Indium Tin Oxide has no OSHA PEL listed.

ACGIH (TLV): TLV for In and its compounds (as In) = 0.1 mg/m³. (as Sn) = 2 mg/m³.

A. ANIMAL TOXICITY

LD50: No data
LC50: No data
Other: No data

B. EFFECTS OF EXPOSURE

ACUTE EFFECTS

Ingestion: Exposure to Indium Compounds may cause bone, joint and hear pain. Tooth decay and gastrointestinal disorders may also result.

Experiments with animals indicate that indium exposures may result in weight loss, reduced appetite and water consumption, kidney and liver damage, paralysis, and damage to the brain, heart, and spleen.

Skin Contact: Generally the product does not cause irritation

Eye Contact: May cause irritation

Inhalation: Mild pulmonary irritation. Mild benign pneumoconiosis (stenosis) may result from chronic long term exposure to tin dust and fumes.

Other: No classification data on carcinogenic studies are available.

EMERGENCY AND FIRST AID PROCEDURES

Ingestion:

Induce vomiting

Skin Contact:

Flush with soap and water

Eye Contact:

Immediately flush eyes, including under eyelids, with large amounts of water for at least 15 minutes. Call a physician.

Inhalation:

Remove to fresh air.

SECTION 6 - REACTIVITY

Incompatibility: No dangerous reactions known

Hazardous Decomposition Products: None known.

Stability: Stable

Hazardous Polymerization: None known.

Other: Avoid acids

SECTION 7 - ENVIRONMENTAL INFORMATION

Spill and Leak Procedures: Sweep or scoop up.

Waste Disposal: Recyclable resources. Consult state, local or federal EPA regulations for proper disposal.

SECTION 8 - PROTECTION INFORMATION

Ventilation Requirements: Local exhaust

Respiratory Protection: High efficiency particle respirator for dusty conditions

Protective Gloves: Neoprene

Eye/Face Protection: ANSI approved safety goggles

SECTION 9 - SPECIAL PRECAUTIONS

Handling and storage: Keep container tightly closed. Store in a cool, dry, well ventilated area. Wash thoroughly after use.

Other Precautions: Lab coat and apron, flame and chemical resistant coveralls, eye-wash capable of sustained flushing, safety drench shower and hygienic facilities for washing.

SECTION 10 - COMMENTS

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet or in combination with any other product or process, is the responsibility of the user.