



Changsha Santech Materials Co.,Ltd.

长沙盛特新材料有限公司

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Material Safety Data Sheet

ITO powder MSDS

Section 1 - Chemical Product and Company Identification

Product Name: Indium Tin Oxide Powder

Molecular formula: 90 mol.% In₂O₃ / 10 mol.% SnO₂

CAS No.: 50926-11-9

Data No.: MSDS-ITO-160524

Manufacturer Information

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Section 2 - Composition, Information on 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 - Hazards Identification

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

Appearance and odor: yellow powder

Section 4 - First Aid Measures

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 Hazards Identification

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.

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 - Accidental Release Measures

Respiratory Nose and Throat

If respiratory tract irritation develops, move the person to a clean air location, give oxygen if breathing is difficult. Minimize health effects by reducing or eliminating air-borne exposure. If symptoms persist, seek medical attention.

Eye If eyes become irritated, flush immediately with large amounts of lukewarm water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Do not rub eyes. Seek medical attention immediately.

Skin If skin becomes irritated, remove exposed clothing. Do not rub or scratch exposed skin and wash area of contact thoroughly with mild soap and water. Seek medical attention if symptoms persist.

Gastrointestinal No data available but if gastrointestinal tract irritation develops, move the person to a clean air environment.

Notes To Physicians Skin and respiratory effects are the result of temporary, mild mechanical irritation; fiber exposure does not result in allergic manifestations.

Section 7 - Handling and Storage

General Storage Store in original container in a cool, dry, well-ventilated area. Keep container closed when not in use.

Handling Procedures Handle ceramic fiber carefully. Limit shearing, cutting, and overall handling of the material to minimize potential release and suspension in air. Whenever possible use hand tools to handle material (limit skin contact). Keep work area clean with wet sweeping to minimize the accumulation of debris.

Used/Empty Containers Product packaging may contain residue. Do not reuse.

Protective Clothing Wear full body clothing, gloves, hat and eye protection. Wash work clothes separately from other clothing. Rinse washer after use. If you take work clothing home, it is recommended you vacuum your clothes with a HEPA filtered vacuum before leaving the work area.

Eye Protection Goggles/safety glasses with side shields should be worn.

Section 8 - Exposure Controls, Personal Protection -----

Engineering Controls: Use engineering controls such as ventilation and dust collection devices to reduce airborne fiber concentrations to the lowest attainable level.

Respiratory Protection: When it is not possible or feasible to significantly reduce airborne fiber and dust levels through engineering controls, or until they are installed, employees are encouraged to use good work practices together with respiratory protection. Before providing respirators to employees (especially negative pressure type), employers should 1) monitor for airborne fibers and respirable cristobalite concentrations using NIOSH method 7400(B) and 7500 respectively and select the appropriate respiratory protection based upon the results of that monitoring, 2) have the workers evaluated by a physician to determine the workers' ability to wear respirators, and 3) implement respiratory protection training programs. Use NIOSH certified respirators, in compliance with OSHA Respiratory Protection Standard 29 CFR 1910.134 and 29 CFR 1926.103, for the particular hazard or airborne concentrations to be encountered in the work environment. For the most current information on respirator selection, contact your supplier. Recommended respirators: Type P95 (US), Type P1 (EU EN 143) Highest level protection: Type OV/AG/P99 (US), Type ABEK-P2 (EU EN 143)

Protective Clothing: Wear full body clothing, gloves, hat and eye protection. Wash work clothes separately from other clothing. Rinse washer after use. If you take work clothing home, it is recommended you vacuum your clothes with a HEPA filtered vacuum before leaving the work area.

Eye Protection: Goggles/safety glasses with side shields should be worn.

Section 9 - Toxicological Information -----

Acute Toxicity Oral	LD50	No data available
Inhalation	LC50	No data available
Dermal	LD50	No data available
Other Information		No data available

Section 10 - Disposal Considerations -----

Waste Disposal Method Dispose of according to Local, State, and Federal regulations

Waste Management To prevent waste materials becoming airborne, a covered container or plastic bagging is

recommended. Comply with federal, state and local regulations. Method of disposal: Landfill.

(Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate, or otherwise inappropriate.

RCRA If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the

product user to determine at the time of disposal whether a material containing the product or derived from the product should be classified as a hazardous waste (40 CFR 261.20-24).

Section 11 - Ecological Information -----

Adverse effects of this material on the environment have not been evaluated. Adverse effects of this material on the environment are not anticipated. Proper disposal techniques to isolate and recover material should be implemented.

Toxicity No data available

Section 12 - Transport Information -----

DOT (US) Not dangerous goods

IMDG Not dangerous goods

IATA Not dangerous goods

Section 13 - Regulatory Information -----

SARA 302 Components: Not subject to reporting requirements.

SARA 313 Components: This material does not contain chemical components with known CAS numbers that exceed minimum threshold reporting levels.

SARA 311/312 Hazards: Acute Health Hazard, Chronic Health Hazard

OSHA: Comply with Hazard Communication Standards 29 CFR 1910.1200 and 29 CFR 1926.59 and Respiratory Protection Standards 29 CFR 1910.134 and 29 CFR 1926.103.

TSCA: All substances contained in this product are listed in the TSCA Chemical Inventory [Section 8(b)].

Section 14 - Additional Information -----

References: based on the present state of our knowledge and is to describe the product with reference to the safety measures that must be taken

Other Special Considerations: Not available.

Created: 10/10/2011

Last Updated: 24/05/2016

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