



Material Safety Data Sheet

Identity: ITO (Indium Oxide/Tin Oxide)

Formula: In₂O₃/SnO₂

SECTION I - GENERAL INFORMATION

Manufacturer: Advanced Engineering Materials Limited (AEM)

The information below is believed to be accurate and represents the best information available to AEM. However, AEM makes no warranty, expressed or implied with respect to such information and assumes no liability resulting from its use.

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Molecular weight: 277.64/150.69

<u>CAS #</u>	<u>OSHA/PEL</u>	<u>ACGIH/TLV</u>	<u>%</u>
50926-11-9	0.1 mg/m ³	0.1 mg/m ³	100

SECTION III – PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: Sublimes at 982°C

Vapor Pressure (vs. air or mm Hg): N/A

Melting Point: 1910°C + 10°C

Specific Gravity: (H₂O=1): 7.16g/cc

Evaporation Rate: N/A

Flash Point: N/A

Solubility in Water: Insoluble

Appearance and odor: Yellow-green powder or metallic color pieces, no odor

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Method Used: Unknown

Explosive Limits: LEL: N/A

UEL: N/A

Extinguishing Media: Use suitable extinguishing agent for surrounding material and type of fire.

Special Fire Fighting Procedures:

Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. Fumes from fire are hazardous. Isolate runoff to prevent environmental pollution.

Unusual Fire and Explosion Hazards: None



SECTION V - HEALTH HAZARD DATA

Routes of Exposure: Inhalation, Skin, Eyes, Ingestion

Health Hazards (Acute and Chronic):

Inhalation:

Acute: Can cause a lung irritation.

Chronic: Severe exposure could cause pulmonary damage.

Ingestion:

Acute: Harmful if swallowed. May cause burns to gastrointestinal tract.

Chronic: May cause kidney and liver damage if indium compounds are injected.

Skin:

Acute: May cause irritation or burns.

Chronic: No chronic health effect recorded.

Eye:

Acute: May cause irritation or burns.

Chronic: No chronic health effects recorded.

Target Organs: Diseases of the liver, kidneys, lungs, blood and blood forming organs.

Emergency and First Aid Procedures:

Inhalation: Remove victim to fresh air, keep warm and quiet, and give oxygen if breathing is difficult; seek medical attention.

Ingestion: Give 1-2 glasses of milk or water and induce vomiting, seek medical attention. Never induce vomiting or give anything by mouth to an unconscious person.

Skin: Remove contaminated clothing, brush material off skin, wash affected area with mild soap and water, and seek medical attention if symptoms persist.

Eye: Flush eyes with lukewarm water, lifting upper and lower eyelids for at least 15 minutes and seek medical attention.

SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material is released or spilled:

Wear appropriate respiratory and protective equipment specified in section VIII. Isolate spill area, provide



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ventilation and extinguish sources of ignition. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal. Take care not to raise dust.

Waste disposal method:

Dispose of in accordance with state, local, and federal regulations.

Hazard Label Information:

Store in cool, dry area and in tightly sealed container. Wash thoroughly after handling.

SECTION VII - CONTROL MEASURES

Protective Equipment Summary (Hazard Label Information):

NIOSH approved respirator, impervious gloves, safety glasses, clothes to prevent contact.

Ventilation:

Local Exhaust: To maintain concentration at low exposure levels.

Mechanical (General): Recommended.

Work/Hygienic/Maintenance Practices:

Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking. Do not blow dust off clothing or skin with compressed air.

Please be advised that N/A can either mean Not Applicable or No Data Has Been Established