

Product name: Solid Indium Tin Oxide in various manufactured forms
Document Nr.: SDS00170IT5799

Date: July 08th 2016
Version: 1.0

Section 1: Identification of the substance or mixture and the company

1.1. Product Identifier

Name: Solid Indium Tin Oxide (ITO) in various manufactured forms
Indium tin oxide (In_2O_3 : SnO_2) CAS #: 50926-11-9

1.2 Relevant applications of the material and uses advised against

Target material for vacuum deposition (sputtering)

1.3. Company details

Vof Micro to Nano
Wateringweg 79
2031EK Haarlem
Netherlands
Tel: +31(0)85-2013155
E: info@microtonano.com

1.4 Emergency telephone number

+31(0)85-2013155 (office hours) Vof Micro to Nano, Netherlands

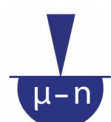
Section 2: Hazards identification

2.1. Classification of the substance or mixture

Physical:	Not classified
Health:	Not classified
Environment:	Not classified
Other hazards:	Not classified

Classification according to Regulation EC Nr. 1272/2008

The substance is not classified as hazardous to health or to the environment according to CLP regulation.



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Classification according to 67/548/EEC of 1999/45/EC

Not applicable

2.2 Labeling elements

Not applicable

2.3 Other hazards

Not applicable

Section 3: Composition / information on components

3.1. Substances

Solid indium tin oxide (ITO) in various manufactured forms

3.2 Mixtures

85-95 WT% In ₂ O ₃ :	CAS #: 1312-43-2
5-10 WT% SnO ₂ :	CAS #: 18282-10-5

Section 4: First aid measures

4.1. Description of first aid measures

Contact with eyes:	Rinse cautiously with water for several minutes. If possible, remove contact lenses. Continue rinsing.
Contact with skin:	Wash with water and soap. Seek medical attention if irritation persists.
Inhalation:	Fresh air, keep warm and at rest. Seek medical attention if ill effects occur
Ingestion:	If swallowed, do not induce vomiting Seek immediate medical advice

4.2. Important symptoms and effects, either immediate or delayed

Inhalation: Not available



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Ingestion: Not available
Skin contact: Generally not a skin irritant
Eye contact: Generally not irritating to eyes

4.3. Indication of any immediate medical attention and special treatment

General advise: If you feel unwell, seek medical advice; show product label if possible
If symptoms persist, always call a doctor

Section 5: Firefighting Measures

5.1. Extinguishing media

Carbon dioxide or dry agent

5.2 Special hazards arising from the substance or mixture

Metal oxide fumes

5.3 Advice to firefighters

Keep container(s) exposed to fire cool by spraying with water
In case of fire; do not breathe fumes

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Not required

6.2 Environmental precautions

Do not allow to enter public sewers and waterways

6.3 Methods and material for containment and clean up

Pick up mechanically



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6.4 Reference to other sections

For further information see section 8

Section 7: Handling and storage

7.1. Precautions for safe handling

Not required

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed, in a cool, well ventilated place
Keep away from Chlorine
Keep out of reach of children

7.3 Specific end uses(s)

Coating material for transparent conductive coatings used in vacuum deposition equipment

Section 8: Exposure control and personal protection

8.1. Control parameters

Occupational exposure limits (OEL)

Ingredient	Material Name	Source	TWA	STEL	Peak	Notes
ITO	Indium tin oxide	US. NIOSH	0.1 mg/m ³	Not available	Not available	Not available
In ₂ O ₃	Indium oxide	US. NIOSH	0.1 mg/m ³	Not available	Not available	Not available
SnO ₂	Tin oxide	US. NIOSH	2 mg/m ³	Not available	Not available	Not available

8.2 Exposure controls

Control procedures: No special measures required.
Maintain appropriate working environment
Personal protection: Protective work clothing



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Inhalation:	Not normally required
Hands and skin:	Not normally required
Eyes:	Not normally required

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance/physical state:	Solid in various forms
Colour:	Greyish
Odour:	None
pH	Not applicable
Melting point/range:	1630°C
Boiling point/range:	Not determined
Flash point:	Not determined
Evaporation rate:	Not available
Explosion limits: upper limit:	Not determined
lower limit:	Not determined
Vapour pressure:	0.00001 hPa estimated
Density:	6.95 g/cm ³ @ 20°C estimated
Solubility in water:	Not soluble in water
Auto-ignition:	Not determined
Viscosity:	Not applicable

9.2 Other information

None

Section 10: Stability and reactivity

10.1. Reactivity

No hazardous reactions known if used for its intended purposes

10.2 Chemical stability

Stable under normal conditions



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10.3 Possibility of hazardous reactions

No hazardous reactions known if used for its intended purposes

10.4 Conditions to avoid

Contact with incompatible materials

10.5 Incompatible materials

Chlorine

10.6 Hazardous decomposition products

No hazardous decomposition products are known

Section 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure:

Inhalation:	Not available
Skin contact:	Not available
Eye contact:	Not available
Sensitisation:	No effects known
Carcinogenicity:	No effects known

Toxicological data: No data for LD/LC 50 values

Section 12: Ecological information

12.1. Aquatic toxicity

Not classified

12.2 Persistence and degradability

No information available



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12.3 Bio-accumulative potential

No information available

12.4 Mobility in soil

Insoluble in water

12.5 Results of PBT and vPvB assessment

Not applicable

12.6 Hazardous decomposition products

No information available

Section 13: Disposal considerations

13.1. Waste treatment methods

Product: This material and its container must be disposed of in a safe way.
Do not discharge into drains or the environment, dispose to an authorised waste collection point.

National regulations: Disposal should be in accordance with local, state or national legislation.

Section 14: Transport information

14.1. UN number

UN-number: N/A

14.2 UN proper shipping name

Proper shipping name: N/A

14.3 Transport hazard class(es)

Class: N/A



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ADR/RID-Classification code: N/A

14.4 Packing group

Packing: N/A

14.5 Incompatible materials

ADR/RID- Environmentally hazardous: N/A
IMDG-Marine pollutant: N/A
IATA/ICAO-Environmentally hazardous: N/A

14.6 Special precautions for user

ADR/RID-Tunnelcode: N/A
IMDG-Ems: N/A
IATA/ICAO-PAX: N/A
IATA/ICAO-CAO: N/A

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC code

Not applicable

Section 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Not listed

15.2 Chemical safety assessment

No information available



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Section 16: Other information

This products should be stored, handled and used in accordance with good industrial hygiene practices and in accordance with any legal regulation.

The information contained herewith is based on the present state of our knowledge and is intended to describe the product from the point of view of safety requirements. It does not guarantee any specific properties.

It is the responsibility of the user to query and verify any information seeming suspect or where doubt on the validity may exist. The buyer assumes all responsibility of using and handling the product in accordance with local, state, federal and international regulations.

