Regulation EC Nr. 1907/2006 Art.31

Product name: Solid Indium Tin Oxide in various manufactured forms Date: April 5th 2022

**Document Nr.:** SDS00170IT5799 **Version:** 2.0

# 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 Tappersweg 91 2031ET 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.



Regulation EC Nr. 1907/2006 Art.31

Product name: Solid Indium Tin Oxide in various manufactured forms Date: April 5th 2022

**Document Nr.:** SDS00170IT5799 **Version:** 2.0

## 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<sub>2</sub>O<sub>3</sub>: CAS #: 1312-43-2 5-10 WT% SnO<sub>2</sub>: 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 of ill effects occur If swallowed, do not induce vomiting

Ingestion: If swallowed, do not induce vomiting Seek immediate medical advice

## 4.2. Important symptoms and effects, either immediate or delayed

Inhalation: Not available



Tappersweg 91 2031ET Haarlem The Netherlands T +31-85-2013155
E info@microtonano.com
I www.microtonano.com

Regulation EC Nr. 1907/2006 Art.31

**Product name:** Solid Indium Tin Oxide in various manufactured forms **Date:** April 5th 2022

**Document Nr.:** SDS00170IT5799 **Version:** 2.0

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



Regulation EC Nr. 1907/2006 Art.31

Product name: Solid Indium Tin Oxide in various manufactured forms Date: April 5th 2022

**Document Nr.:** SDS00170IT5799 **Version:** 2.0

#### 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 <sup>3</sup> | Not available | Not available | Not available |
| In2O3      | Indium oxide     | US. NIOSH | 0.1 mg/m <sup>3</sup> | Not available | Not available | Not available |
| SnO2       | Tin oxide        | US. NIOSH | 2 mg/m³               | 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



Tappersweg 91 2031ET Haarlem The Netherlands T +31-85-2013155
E info@microtonano.com
I www.microtonano.com

Regulation EC Nr. 1907/2006 Art.31

**Product name:** Solid Indium Tin Oxide in various manufactured forms **Date:** April 5th 2022

Document Nr.: SDS00170IT5799 Version: 2.0

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/cm3 @ 20°C estimated

Solubility in water:

Auto-ignition:

Viscosity:

Not soluble in water

Not determined

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



Regulation EC Nr. 1907/2006 Art.31

Document Nr.: SDS00170IT5799 Version: 2.0

Product name: Solid Indium Tin Oxide in various manufactured forms Date: April 5th 2022

#### 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 availableSkin contact:Not availableEye contact:Not availableSensitisation:No effects knownCarcinogenicity: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



Regulation EC Nr. 1907/2006 Art.31

Product name: Solid Indium Tin Oxide in various manufactured forms Date: April 5th 2022

**Document Nr.:** SDS00170IT5799 **Version:** 2.0

## 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



Regulation EC Nr. 1907/2006 Art.31

Product name: Solid Indium Tin Oxide in various manufactured forms Date: April 5th 2022

**Document Nr.:** SDS00170IT5799 **Version:** 2.0

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 poluttant: 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



Regulation EC Nr. 1907/2006 Art.31

Product name: Solid Indium Tin Oxide in various manufactured forms Date: April 5th 2022

**Document Nr.:** SDS00170IT5799 **Version:** 2.0

#### 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.