1. Identification

Product Name
Tin(IV) oxide

Cat No.:
AC223680000; AC223681000; AC223685000

CAS No
18282-10-5

Synonyms
Stannic oxide

Recommended Use
Laboratory chemicals.

Uses advised against
Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company
Fisher Scientific Company
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number
For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99
**CHEMTREC** Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

2. Hazard(s) identification

Classification
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label Elements
None required

Hazards not otherwise classified (HNOC)
Other hazards
May cause skin, eye, and respiratory tract irritation.

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tin oxide (SnO2)</td>
<td>18282-10-5</td>
<td>&gt;95</td>
</tr>
</tbody>
</table>

4. First-aid measures

- **Eye Contact**: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
- **Skin Contact**: Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.
- **Inhalation**: Remove to fresh air. Get medical attention immediately if symptoms occur. If not breathing, give artificial respiration.
- **Ingestion**: Do NOT induce vomiting. Get medical attention immediately.
- **Most important symptoms and effects**: None reasonably foreseeable.
- **Notes to Physician**: Treat symptomatically.

5. Fire-fighting measures

- **Suitable Extinguishing Media**: Water spray or fog is preferred; if water not available use dry chemical, CO2 or regular foam.
- **Unsuitable Extinguishing Media**: No information available
  - **Flash Point**: No information available
  - **Method -**: No information available
- **Autoignition Temperature**: Not applicable
- **Explosion Limits**: No data available
  - **Upper**: No data available
  - **Lower**: No data available
- **Sensitivity to Mechanical Impact**: No information available
- **Sensitivity to Static Discharge**: No information available

**Specific Hazards Arising from the Chemical**
Keep product and empty container away from heat and sources of ignition.

**Hazardous Combustion Products**
Metal oxides.

**Protective Equipment and Precautions for Firefighters**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**NFPA**

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>N/A</td>
</tr>
</tbody>
</table>
6. Accidental release measures

**Personal Precautions**
Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation.

**Environmental Precautions**
Should not be released into the environment. Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information.

Methods for Containment and Clean Up
Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

7. Handling and storage

**Handling**
Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation. Avoid dust formation.

**Storage.**

8. Exposure controls / personal protection

**Exposure Guidelines**

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
<th>Mexico OEL (TWA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tin oxide (SnO2)</td>
<td>TWA: 2 mg/m$^3$</td>
<td>(Vacated) TWA: 2 mg/m$^3$</td>
<td>IDLH: 100 mg/m$^3$ TWA: 2 mg/m$^3$</td>
<td>TWA: 2 mg/m$^3$ STEL: 4 mg/m$^3$</td>
</tr>
</tbody>
</table>

**Legend**

ACGIH - American Conference of Governmental Industrial Hygienists
OSHA - Occupational Safety and Health Administration
NIOSH IDLH: NIOSH - National Institute for Occupational Safety and Health

**Engineering Measures**
Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal Protective Equipment**

**Eye/face Protection**
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin and body protection**
Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection**
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Hygiene Measures**
Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Powder Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Off-white</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>No information available</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>No information available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
10. Stability and reactivity

Reactive Hazard
None known, based on information available

Stability
Stable under normal conditions.

Conditions to Avoid
Incompatible products. Avoid dust formation.

Incompatible Materials
Strong oxidizing agents, Strong acids, Strong reducing agents, Alkali metals

Hazardous Decomposition Products
Metal oxides

Hazardous Polymerization
Hazardous polymerization does not occur.

Hazardous Reactions
None under normal processing.

11. Toxicological information

Acute Toxicity
No acute toxicity information is available for this product

Component Information

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tin oxide (SnO2)</td>
<td>&gt;20 g/kg (Rat)</td>
<td>Not listed</td>
<td>LC50 &gt; 2.04 mg/L (Rat) 4 h</td>
</tr>
</tbody>
</table>

Toxicologically Synergistic Products
No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation
No information available

Sensitization
No information available

Carcinogenicity
The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tin oxide (SnO2)</td>
<td>18282-10-5</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Mutagenic Effects
No information available

Reproductive Effects
No information available.

Developmental Effects
No information available.

Teratogenicity
No information available.

STOT - single exposure
None known
**Tin(IV) oxide**

**Revision Date**: 24-Dec-2021

<table>
<thead>
<tr>
<th>STOT - repeated exposure</th>
<th>None known</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspiration hazard</td>
<td>No information available</td>
</tr>
<tr>
<td>Symptoms / effects, both acute and delayed</td>
<td>No information available</td>
</tr>
<tr>
<td>Endocrine Disruptor Information</td>
<td>No information available</td>
</tr>
<tr>
<td>Other Adverse Effects</td>
<td>The toxicological properties have not been fully investigated.</td>
</tr>
</tbody>
</table>

### 12. Ecological information

**Ecotoxicity**
May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system.

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Algae</th>
<th>Freshwater Fish</th>
<th>Microtox</th>
<th>Water Flea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tin oxide (SnO2)</td>
<td>Not listed</td>
<td>LC50: &gt; 100 mg/L, 96h static (Oncorhynchus mykiss)</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

**Persistence and Degradability**
Insoluble in water May persist

**Bioaccumulation/ Accumulation**
No information available.

**Mobility**
Is not likely mobile in the environment due its low water solubility.

### 13. Disposal considerations

**Waste Disposal Methods**
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

### 14. Transport information

<table>
<thead>
<tr>
<th>DOT</th>
<th>Not regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDG</td>
<td>Not regulated</td>
</tr>
<tr>
<td>IATA</td>
<td>Not regulated</td>
</tr>
<tr>
<td>IMDG/IMO</td>
<td>Not regulated</td>
</tr>
</tbody>
</table>

### 15. Regulatory information

**United States of America Inventory**

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>TSCA</th>
<th>TSCA Inventory notification - Active-Inactive</th>
<th>TSCA - EPA Regulatory Flags</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tin oxide (SnO2)</td>
<td>18282-10-5</td>
<td>X</td>
<td>ACTIVE</td>
<td>-</td>
</tr>
</tbody>
</table>

**Legend:**
- **TSCA** US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)
- **X** - Listed
- **-** - Not Listed

**TSCA 12(b) - Notices of Export**
Not applicable

**International Inventories**
Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>PICCS</th>
<th>ENCS</th>
<th>ISHL</th>
<th>AICS</th>
<th>IECSC</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tin oxide (SnO2)</td>
<td>18282-10-5</td>
<td>X</td>
<td>-</td>
<td>242-159-0</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>KE-33849</td>
</tr>
</tbody>
</table>

KECL - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)
### U.S. Federal Regulations

**SARA 313**  
Not applicable

**SARA 311/312 Hazard Categories**  
See section 2 for more information

**CWA (Clean Water Act)**  
Not applicable

**Clean Air Act**  
Not applicable

**OSHA - Occupational Safety and Health Administration**  
Not applicable

**CERCLA**  
Not applicable

**California Proposition 65**  
This product does not contain any Proposition 65 chemicals.

### U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Component</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tin oxide (SnO2)</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### U.S. Department of Transportation

Reportable Quantity (RQ):  
DOT Marine Pollutant: N
DOT Severe Marine Pollutant: N

### U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

### Other International Regulations

**Mexico - Grade**  
No information available

### Authorisation/Restrictions according to EU REACH

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

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>OECD HPV</th>
<th>Persistent Organic Pollutant</th>
<th>Ozone Depletion Potential</th>
<th>Restriction of Hazardous Substances (RoHS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tin oxide (SnO2)</td>
<td>18282-10-5</td>
<td>Listed</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tin oxide (SnO2)</td>
<td>18282-10-5</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

### 16. Other information

**Prepared By**  
Regulatory Affairs  
Thermo Fisher Scientific  
Email: EMSDS.RA@thermofisher.com
Disclaimer
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End of SDS