# 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.

### Company

- Fisher Scientific  
  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.

**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 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.

**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>

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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
Keep containers tightly closed in a dry, cool and well-ventilated place.

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/m³</td>
<td>(Vacated) TWA: 2 mg/m³</td>
<td>IDLH: 100 mg/m³ TWA: 2 mg/m³</td>
<td>TWA: 2 mg/m³ STEL: 4 mg/m³</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>
<tr>
<td>Flammability (solid,gas)</td>
<td>No information available</td>
</tr>
</tbody>
</table>
Flammability or explosive limits
- Upper: No data available
- Lower: No data available

Vapor Pressure: No information available
Vapor Density: Not applicable
Specific Gravity: 6.950
Solubility: No information available
Partition coefficient; n-octanol/water: No data available
Autoignition Temperature: Not applicable
Decomposition Temperature: No information available
Viscosity: Not applicable

Molecular Formula: O2 Sn
Molecular Weight: 150.69

### 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**

**Product Information**
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</td>
<td>Not listed</td>
<td>Not listed</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

**STOT - repeated exposure**
None known
Aspiration hazard
No information available

Symptoms / effects, both acute and delayed
No information available

Endocrine Disruptor Information
No information available

Other Adverse Effects
The toxicological properties have not been fully investigated.

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

DOT
Not regulated

TDG
Not regulated

IATA
Not regulated

IMDG/IMO
Not regulated

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 - 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), Australia (AICS), China (IECSC), Korea (ECL).

<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>AICS</th>
<th>IECSC</th>
<th>KECL</th>
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</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>KE-33849</td>
</tr>
</tbody>
</table>

U.S. Federal Regulations

SARA 313
Not applicable
Tin(IV) oxide

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): N
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

16. Other information

Prepared By
Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date
22-Sep-2009

Revision Date
19-Jan-2018

Print Date
19-Jan-2018

Revision Summary
This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of SDS