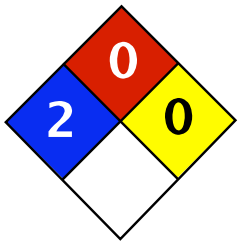

Health	2
Fire	0
Reactivity	0
Personal Protection	E

Material Safety Data Sheet
Stannic oxide MSDS

Section 1: Chemical Product and Company Identification

Product Name: Stannic oxide

Catalog Codes: SLS4123

CAS#: 18282-10-5 or 1332-29-2

RTECS: XQ4000000

TSCA: TSCA 8(b) inventory: CAS No. 18282-10-5 is not TSCA listed; CAS No. 1332-29-2 is TSCA listed

CI#: Not available.

Synonym: Tin oxide; Tin dioxide; Tin (IV) oxide; cassiterite; tin peroxide; stannic acid; stannic anhydride; Stannic dioxide; White tin oxide

Chemical Name: Tin (IV) Oxide

Chemical Formula: SnO2

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Stannic oxide	18282-10-5 or	100
	1332-29-2 or	
	1317-45-9	

Toxicological Data on Ingredients: Stannic oxide: ORAL (LD50): Acute: >20000 mg/kg [Rat]. >20000 mg/kg [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of inhalation. Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.

The substance is toxic to mucous membranes.
The substance may be toxic to lungs, upper respiratory tract.
Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact: Not available.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not applicable.

Flash Points: Not applicable.

Flammable Limits: Not applicable.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not applicable.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
Stannic oxide is reduced by potassium or sodium at gentle heat and the reaction is accompanied by incandescence.
On heating stannic oxide at 300 deg. C, oxidation proceeds incandescently.
Stannic oxide ignites in nitrous oxide at 400 deg. C and incandesces when heated in sulfur dioxide.

Special Remarks on Fire Hazards:
Stannic oxide is reduced by potassium or sodium at gentle heat and the reaction is accompanied by incandescence.
On heating stannic oxide at 300 deg. C, oxidation proceeds incandescently.
Stannic oxide ignites in nitrous oxide at 400 deg. C and incandesces when heated in sulfur dioxide.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill:
Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:
Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 2 (mg(Sn)/m) from ACGIH (TLV) [United States]
Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Powdered solid.)

Odor: Odorless.

Taste: Not available.

Molecular Weight: 150.7 g/mole

Color: White. Grey.

pH (1% soln/water): Not applicable.

Boiling Point: Not available.

Melting Point:
1630°C (2966°F)(Handbook of Chemistry and Physics, 69th. ed.)

1127 deg. C (Hawley's Condensed Chemical Dictionary)
Sublimes at 1800 - 1900 deg. C.

Critical Temperature: Not available.

Specific Gravity: 6.95 at room tempurature (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility:
Insoluble in cold water, hot water.
Soluble in concentrated sulfuric acid, hydrochloric acid.
Insoluble in cold alcohol, Aqua Regia, cold acids.
Slowly soluble in hot concentrated potassium or sodium hydroxide.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Incompatible materials

Incompatibility with various substances: Reactive with oxidizing agents.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:
Incompatible with chlorine trifluoride. Chloride Trifluoride produces violent reaction without flame in presence of stannic oxide.
Incompatible with potassium or sodium. Stannic oxide is reduced by potassium or sodium at gentle heat and the reaction is accompanied by incandescence.
On heating stannic oxide at 300 deg. C, oxidation proceeds incandescently.
Stannic oxide ignites in nitrous oxide at 400 deg. C and incandesces when heated in sulfur dioxide.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): >20000 mg/kg [Mouse].

Chronic Effects on Humans:
Causes damage to the following organs: mucous membranes.
May cause damage to the following organs: lungs, upper respiratory tract.

Other Toxic Effects on Humans:
Hazardous in case of inhalation.
Slightly hazardous in case of skin contact (irritant), of ingestion.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects:
Skin: May cause skin irritation.
Eyes: May cause eye irritation.
Inhalation: Although poorly absorbed when inhaled, Inhalation of dust/fumes may cause nausea, vomiting diarrhea, respiratory tract irritation, stannosis or benign pneumocoiosis, dyspnea (breathing difficulty, decreased pulmonary function. Inhalation of fumes may also cause metal fume fever, which is characterized by flu-like symptoms such as metallic taste, fever, chills, cough, weakness, chest pain, muscle pain, and increased white blood cell count.
Ingestion: There is as low toxicological risk generally associated with inorganic tin compound ingestion due largely to the low degree of absorption, low tissue retention, and rapid turnover of the element. Ingestion of large amounts may cause gastrointestinal tract irritation, nausea, cramps, vomiting, diarrhea. It may interfere with various enzyme systems. Inorganic tin salts may affect the central nervous system, heart, liver.
Chronic Potential Health Effects:
Inhalation: Beign pneumoconiosis (stannosis), dyspnea, or decreased pulmonary may occur following chronic inhalation exposure.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations:
Massachusetts RTK: for CAS No. 1332-29-2; Massachusetts RTK lists it as Tin Oxide.

CAS No. 18282-10-5 is not TSCA listed; CAS No. 1332-29-2 is TSCA listed

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances. (EINECS no. 242-159-9 for CAS No. 1332 -29-2); EINECS listed as Tin Dioxide)

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC):
This product is not classified according to the EU regulations.
Not applicable.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 0

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 0

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves.
Lab coat.
Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
Safety glasses.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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