Tin Oxide (SnO2) - All Grades

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Issue date: 6/30/2021 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form	:	Substance
Substance name	:	Tin Oxide (SnO2) - All Grades
CAS-No.	:	18282-10-5
Synonyms	:	tin(IV) oxide, stannic oxide

1.2. Recommended use and restrictions on use

Use of the substance/mixture	:	Raw material
Restrictions on use	:	Any use not specified

1.3. Supplier

Supplier
Luxfer MEL Technologies
Elektron Technology Centre, Lumns Lane
Manchester M27 8LN
England
T +44 (0) 161 911 1100 - F +44 (0) 161 911 1099
MELT-Sales@luxfer.com - www.luxfer.com

Supplier
Achemtech Co. Ltd
22, Jeongnamdong-ro 337 beon-gil, Jeongnam-myeon, Hwaseong-si, Gyeonggi-do, Korea
우)18514
T +82-31-372-8090 / 031)372-8090 - F +82-31-353-8073 / 031)353-8073
purchase@achemtech.co.kr - achemtech.co.kr

United States
Luxfer MEL Technologies
500 Barbertown Point Breeze Road
Flemington, NJ 08822-9111
USA
T 908-782-5800
MELT-Sales@luxfer.com
www.luxfer.com

Australia

Canada

1.4. Emergency telephone number

Emergency number	:	+44 (0) 161 911 1100 (Luxfer MEL Technologies) +44 (0) 1865 407333 (Global Service)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Not classified

2.2. GHS Label elements, including precautionary statements

GHS US labelling

No labelling applicable

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification	:	Dust from this product may cause respiratory irritation. Inhalation of fumes or vapours may cause respiratory irritation. Slightly irritating to eyes and skin.

2.4. Unknown acute toxicity (GHS_US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	:	Tin Oxide (SnO2) - All Grades
CAS-No.	:	18282-10-5

Name	Product identifier	%	GHS US classification
Tin dioxide	CAS-No.: 18282-10-5	100	Not classified

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : If inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Artificial respiration and/or oxygen if necessary.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persists.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. If you feel unwell, seek medical advice.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : Dust from this product may cause irritation to the respiratory tract. Inhalation of fumes may cause metal fume fever.

Symptoms/effects after skin contact : May cause slight irritation.

Symptoms/effects after eye contact : May cause slight irritation.

Chronic symptoms : Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. Stannosis.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media : None known.

5.2. Specific hazards arising from the chemical

Fire hazard : Burning produces irritating, toxic and noxious fumes. On burning formation of metallic fumes.

Explosion hazard : Product is not explosive.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Wear a self contained breathing apparatus. Wear fire/flame resistant/retardant clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Do not breathe dust. Do not breathe fumes. Wear personal protective equipment.

6.1.1. For non-emergency personnel

Protective equipment : Refer to section 8.2.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Refer to section 8.2.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain and collect as any solid.

Methods for cleaning up : On land, sweep or shovel into suitable containers.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe dust. Do not breathe fumes. Avoid contact with skin and eyes.

Hygiene measures : Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool well ventilated place.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Tin Oxide (SnO2) - All Grades (18282-10-5)
No data available

Tin dioxide (18282-10-5)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Tin dioxide
ACGIH TWA (mg/m³)	2 mg/m³ (I - Inhalable particulate matter)
Remark (ACGIH)	TLV® Basis: Pneumoconiosis
Regulatory reference	ACGIH 2021
USA - OSHA - Occupational Exposure Limits	
OSHA PEL TWA [1]	2 mg/m³
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL TWA	2 mg/m³

8.2. Appropriate engineering controls

Appropriate engineering controls : Provide local exhaust or general room ventilation. Avoid creating or spreading dust.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:
Wear suitable gloves resistant to chemical penetration. Vinyl. PVC

Eye protection:
In case of dust production: protective goggles

Respiratory protection:
In case of inadequate ventilation wear respiratory protection. Appropriate dust or mist respirator should be used if airborne particles are generated when handling this material

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Powder.
Colour	:	white
Odour	:	odourless
Odour threshold	:	No data available
pH	:	No data available
Melting point	:	231.9 °C
Freezing point	:	No data available
Boiling point	:	2270 °C
Flash point	:	No data available
Relative evaporation rate (butylacetate=1)	:	No data available
Flammability (solid, gas)	:	Non flammable.
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	6.936
Solubility	:	insoluble in water.
Log Pow	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive limits	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

None known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	Not classified
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Not classified

Tin dioxide (18282-10-5)

Tin dioxide (18282-10-5)	
LD50 Oral rat	> 2000 mg/kg
LC50 Inhalation rat	> 2.04 mg/l/4h

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Viscosity, kinematic : No data available
Likely routes of exposure : Skin and eye contact. Inhalation.
Symptoms/effects after inhalation : Dust from this product may cause irritation to the respiratory tract. Inhalation of fumes may cause metal fume fever.
Symptoms/effects after skin contact : May cause slight irritation.
Symptoms/effects after eye contact : May cause slight irritation.
Chronic symptoms : Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. Stannosis.

SECTION 12: Ecological information

12.1. Toxicity

Tin dioxide (18282-10-5)	
LC50 fish 1	> 100 mg/l 96 h Oncorhynchus mykiss
EC50 crustacea	> 100 mg/l 48 h Daphnia magna
EC50 other aquatic organisms 1	> 1000 mg/l 3 h Activated sludge

12.2. Persistence and degradability

Tin Oxide (SnO2) - All Grades (18282-10-5)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Tin Oxide (SnO2) - All Grades (18282-10-5)	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

Tin Oxide (SnO2) - All Grades (18282-10-5)	
Ecology - soil	Not established.

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Sewage disposal recommendations : Do not dispose of waste into sewer.
Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number

Not regulated for transport

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Proper Shipping Name (IATA) : Not applicable

14.3. Transport hazard class(es)

DOT
Transport hazard class(es) (DOT) : Not applicable

IMDG
Transport hazard class(es) (IMDG) : Not applicable

IATA
Transport hazard class(es) (IATA) : Not applicable

14.4. Packing group

Packing group (DOT) : Not applicable
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

DOT
No data available

IMDG
No data available

IATA
No data available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed as Active, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

Tin dioxide (18282-10-5)
Listed on the Canadian DSL (Domestic Substances List)

National regulations

Tin dioxide (18282-10-5)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

Tin dioxide (18282-10-5)
Listed on KECI (Korean Existing Chemicals Inventory) Listed on the TCSI (Taiwan Chemical Substance Inventory) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm.

Component	State or local regulations
Tin dioxide(18282-10-5)	U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

Data sources : ACGIH (American Conference of Government Industrial Hygienists). European Chemicals Agency (ECHA) Registered Substances list. Accessed at http://echa.europa.eu/. European Chemicals Agency (ECHA) C&L Inventory database. Accessed at http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database. Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition. Manufacturer Information. National Fire Protection Association. Fire Protection Guide to Hazardous Materials; 10th edition. OSHA 29CFR 1910.1200 Hazard Communication Standard. TSCA Chemical Substance Inventory. Accessed at http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html.

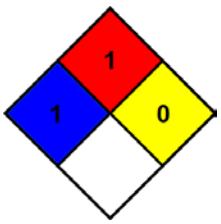
Other information : None.

Abbreviations and acronyms	
	ATE: Acute Toxicity Estimate
	CAS (Chemical Abstracts Service) number
	CLP: Classification, Labelling, Packaging.
	EC50: Environmental Concentration associated with a response by 50% of the test population.
	GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).
	LD50: Lethal Dose for 50% of the test population
	OSHA: Occupational Safety & Health Administration
	STEL: Short Term Exposure Limits
	TWA: Time Weighted Average

NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and not reactive with water.



This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.