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SAFETY DATA SHEET

Tin Oxide (SnO_2) - All Grades

1 Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier — Tin Oxide

CAS Number:	18282-10-5
IUPAC Nomenclature:	tin dioxide
Synonyms:	tin(IV) oxide, stannic oxide
REACH registration number:	01-2119946062-44-0000

1.2. Relevant identified uses of the substance or mixture and uses advised against

Uses of the substance include, but are not limited to, as a raw material for use in ceramic colours and glazes, electrodes for glass melting, electrical contact materials, electrical and electronic components, brake pads, polishing
There are currently no uses that are advised against for the substance

1.3. Details of the supplier of the safety data sheet

Keeling & Walker Limited
Whieldon Road,
Stoke-on-Trent,
ST4 4JA, U.K.

E-mail: technical@keelingwalker.co.uk

1.4. Emergency telephone number — + 44 (0) 1782 744 136

2 Hazards identification

2.1. Classification of the substance or mixture

Tin oxide is not classified as a hazardous substance for carriage or supply

2.2. Label Elements — Not applicable

2.3. Other hazards — Chronic exposure to tin dioxide dust may cause Stannosis (pneumoconiosis)

3 Composition/information on ingredients

3.1. Substances

tin dioxide, chemical formula SnO_2

Synonyms: tin(IV) oxide, tin oxide, stannic oxide

CAS Number: 18282-10-5
EC Number: 242-159-0

4 First aid measures

4.1. Description of first aid measures

Inhalation:	Remove from exposure to fresh air
Skin contact:	The substance is non-irritating
Eye contact:	Flush eyes with copious amounts of water
Ingestion:	In case of persistent symptoms consult doctor

4.2. Most important symptoms and effects, both acute and delayed

May be irritating to eyes
Chronic exposure to tin dioxide dust may cause Stannosis (pneumoconiosis)

4.3. Indication of any immediate medical attention and special treatment needed

No additional requirements other than those listed in Section 4.1.

5 Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:	As appropriate to the surrounding environment
Unsuitable extinguishing media:	None

5.2. Special hazards arising from the substance or mixture

Special hazards:	None known

5.3. Advice for firefighters

Additional advice for firefighters:	No special measures required

6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Do not breathe dust. Wear appropriate personal protective equipment

6.2. Environmental precautions

No special measures required

6.3. Methods and material for containment and cleaning up

Vacuum cleaner or wet-sweeping. Neutralising chemicals not required

6.4. Reference to other sections

Refer to Sections 8 and 13 for exposure controls/personal protection and disposal considerations

7 Handling and storage

7.1. Precautions for safe handling

Avoid causing dust. Use local exhaust ventilation or adequate respiratory protective equipment

7.2. Conditions for safe storage, including any incompatibilities

No special requirements

7.3. Specific end use(s)

Refer to Section 1.2.

8 Exposure controls/personal protection

8.1. Control parameters

Inhalation: Workplace Exposure Limits:

Tin dioxide:	2mg.m^{-3} (as Sn)	Long-term exposure limit (8-hour TWA reference period)
	4mg.m^{-3} (as Sn)	Short-term exposure limit (15-minute reference period)

8.2. Exposure controls

Use local exhaust ventilation or adequate respiratory protective equipment to maintain exposure below Workplace Exposure Limits

9 Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:	White powder
Odour:	Odourless
pH:	neutral (100g/l slurry)
Melting point:	Decomposes in air at 1613^{o}C
Flammability:	Non-flammable
Relative density:	6.936
Solubility in water:	Practically insoluble (below detection limit)

9.2. Other information

Non applicable

10 Stability and reactivity

10.1.	**Reactivity**	Stable under normal conditions of storage and use
10.2.	**Chemical stability**	Stable under normal conditions of storage and use
10.3.	**Possibilities of hazardous reactions**	None known
10.4.	**Conditions to avoid**	None known
10.5	**Incompatible materials**	None known
10.6.	**Hazardous decomposition products**	None known

11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity, oral	Non-toxic - LD_{50} greater than 2.0g/kg bodyweight
Acute toxicity, inhalation:	Non-toxic - LC_{50} greater than 2.04mg/l (maximum test concentration attainable) Chronic exposure to tin dioxide dust may cause Stannosis (pneumoconiosis)
Skin corrosion / irritation:	Non-irritating
Skin sensitisation:	Non-sensitising
Eye contact:	May cause mild irritation to eyes

12 Ecological information

Insoluble in water, stable and inert under normal environmental conditions

12.1. Toxicity

Invertebrates *(Daphnia magna)*	24 h EC_{50}	> 0.1 g/l
	48 h EC_{50}	> 0.1 g/l
	NOEC	≥ 0.1 g/l
Single Cell Green Alga *(Desmodesmus subspicatus)*	72 h EC_{50}	> 100 mg/l
	72 h NOEC	9.77 mg/l
	72 h LOEC	31.3 mg/l
Fish *(Oncorhynchus mykiss)*	96 h LC50	> 100 mg/l
Microorganisms *(Activated sludge)*	3 h EC50	> 1000 mg/l

12.2. Persistence and degradability No data

12.3. Bioaccumulative potential No data

12.4. Mobility in soil No data

12.5. Results of PBT and vPvB assessment No data, assessment not required

12.6. Other adverse effects None known

13 Disposal considerations

13.1. Waste treatment methods

Disposal of product / packaging: According to official regulations

14 Transport information

14.1. UN Number Not classified as dangerous goods

14.2. UN proper shipping name Not applicable

14.3. Transport hazard class(es) Not applicable

14.4. Packing group Not applicable

14.5. Environmental hazards None known

14.6. Special precautions for user None

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable

15 Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture Not applicable

15.2. Chemical safety assessment Not required, substance is not classified

16 Other information

Exposure limits reference: EH40/2005 Workplace exposure limits (as amended December 2011)

Compiled in accordance with: Regulation (EC) No. 1272/2008

The information given is based on our present state of knowledge and does not represent a guarantee of any product characteristics

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