STANNOUS CHLORIDE

Safety Data Sheet

According to SANS 10234:2008 and SANS 11014:2010

Issue date:13/02/2020 Revision date: 13/02/2025 : Version: 1.0

SECTION 1: Identification

1.1. Product identifier

Trade name	:	STANNOUS CHLORIDE
EC-No.	:	231-868-0
CAS-No.	:	7772-99-8
UN-No. (ADR)	:	3260
Product code	:	119300xxx
Formula	:	SnCl2

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

Recommended uses and restrictions	:	For laboratory use only

1.3. Supplier's details

Labchem (Pty)Ltd
6 Wakefield Road
Founders Hill
1609 Johannesburg - South Africa
T +27 11 452 1116 - F +27 86 588 0293
techlab@labchem.co.za - www.labchem.co.za

1.4. Emergency telephone number

Emergency number	:	+27 11 452 1116

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to the United Nations GHS

Acute toxicity (oral), Category 4	H302
Skin corrosion/irritation, Category 1	H314
Serious eye damage/eye irritation, Category 1	H318
Specific target organ toxicity — Repeated exposure, Category 2	H373
Hazardous to the aquatic environment — Acute Hazard, Category 1	H400

Full text of H statements : see section 16

2.2. Label elements

Labelling according to the United Nations GHS

Hazard pictograms (GHS-ZA) :

GHS05 GHS07 GHS08 GHS09

Signal word (GHS-ZA) : Danger

Hazard statements (GHS-ZA) :
H302 - Harmful if swallowed.
H314 - Causes severe skin burns and eye damage.
H373 - May cause damage to organs through prolonged or repeated exposure.
H400 - Very toxic to aquatic life.

Precautionary statements (GHS-ZA) :
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTER or doctor.
P314 - Get medical advice/attention if you feel unwell.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P330 - Rinse mouth.
P363 - Wash contaminated clothing before reuse.

P391 - Collect spillage.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

Adverse physicochemical, human health and environmental effects : May cause damage to organs through prolonged or repeated exposure,Harmful if swallowed,Causes severe skin burns and eye damage,Causes serious eye damage,Very toxic to aquatic life.

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance identification codes: See section 1.1

Name	Product identifier	%	Classification according to the United Nations GHS
tin(II) chloride (Main constituent)	(CAS-No.) 7772-99-8	≥ 99.5	Acute Tox. 4 (Oral), H302 Skin Corr. 1, H314 Eye Dam. 1, H318 STOT RE 2, H373 Aquatic Acute 1, H400

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital. Call a physician immediately.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact : Wipe off dry product from skin. Wash immediately with lots of water (15 minutes)/shower. Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital. Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.

First-aid measures after eye contact : Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

First-aid measures after ingestion : Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Immediately consult a doctor/medical service. Call Poison Information Centre (www.big.be/antigif.html). Ingestion of large quantities: immediately to hospital. Rinse mouth. Do not induce vomiting. Call a physician immediately.

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

Symptoms/effects after inhalation : AFTER INHALATION OF DUST: Corrosion of the upper respiratory tract. Coughing. Dry/sore throat. Respiratory difficulties.

Symptoms/effects after skin contact : Caustic burns/corrosion of the skin. Burns.

Symptoms/effects after eye contact : Corrosion of the eye tissue. Serious damage to eyes.

Symptoms/effects after ingestion : Possible esophageal perforation. Burns to the gastric/intestinal mucosa. Burns.

Chronic symptoms : Skin rash/inflammation. Lung tissue affection/degeneration.

Potential adverse human health effects and symptoms : Harmful if swallowed. Causes severe skin burns. Slightly harmful in contact with skin. May cause respiratory irritation. Harmful if inhaled. Causes serious eye damage. Caution! Substance is absorbed through the skin.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Adapt extinguishing media to the environment for surrounding fires. Water spray. Dry powder. Foam.

5.2. Special hazards arising from the substance or mixture

Fire hazard	:	DIRECT FIRE HAZARD: Non combustible. INDIRECT FIRE HAZARD: Reactions involving a fire hazard: see "Reactivity Hazard".
Explosion hazard	:	DIRECT EXPLOSION HAZARD: No direct explosion hazard.
Hazardous decomposition products in case of fire	:	On heating/burning: release of toxic and corrosive gases/vapours (hydrogen chloride) and formation of metallic fumes.

5.3. Advice for firefighters

Precautionary measures fire	:	Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions	:	After cooling: persistant risk of physical explosion. Take account of toxic/corrosive precipitation water. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.
Protection during firefighting	:	Heat/fire exposure: compressed air/oxygen apparatus. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No additional information available

6.1.1. For non-emergency personnel

Protective equipment	:	Gloves. Face shield. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Corrosion-proof suit.
Emergency procedures	:	Ventilate spillage area. Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames. Wash contaminated clothes. In case of hazardous reactions: keep upwind. In case of reactivity hazard: consider evacuation. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment	:	Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

For containment	:	Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Dam up the solid spill. Knock down/dilute dust cloud with water spray. Collect spillage.
Methods for cleaning up	:	Mechanically recover the product. Stop dust cloud by covering with sand/earth. Scoop solid spill into closing containers. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.
Other information	:	Dispose of materials or solid residues at an authorized site.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Ensure good ventilation of the work station. Avoid raising dust. Keep away from naked flames/heat. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Keep container tightly closed. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes. Wear personal protective equipment.
Hygiene measures	:	Observe strict hygiene. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	:	Store locked up. Store in a well-ventilated place. Keep cool.
Storage area	:	Store in a dry area. May be stored under inert gas. Meet the legal requirements.
Incompatible materials	:	May be corrosive to metals.
Heat and ignition sources	:	KEEP SUBSTANCE AWAY FROM: heat sources.
Information on mixed storage	:	KEEP SUBSTANCE AWAY FROM: oxidizing agents. combustible materials. (strong) acids. metals. metal powders. water/moisture.
Special rules on packaging	:	SPECIAL REQUIREMENTS: hermetical. watertight. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials	:	SUITABLE MATERIAL: glass. synthetic material. MATERIAL TO AVOID: metal.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

STANNOUS CHLORIDE (7772-99-8)	
South Africa - Occupational Exposure Limits (Recommended Limits)	
Local name	Tin, oxide and inorganics except SnH4
OEL TWA (mg/m³)	2 mg/m³
OEL STEL (mg/m³)	4 mg/m³
Regulatory reference	Government Notice. R: 1179

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment (PPE)

Materials for protective clothing : GIVE EXCELLENT RESISTANCE: latex. GIVE GOOD RESISTANCE: butyl rubber. neoprene. PVC

Hand protection : Protective gloves against chemicals (EN 374)

Eye protection : Face shield. In case of dust production: protective goggles

Skin and body protection : In case of dust production: head/neck protection. Corrosion-proof clothing

Respiratory protection : Dust production: dust mask with filter type P3. On heating: full face mask with filter type B. High dust production: self-contained breathing apparatus

Personal protective equipment symbol(s):

8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Crystalline solid. Crystalline powder. Flakes.

Molecular mass : 189.59 g/mol

Colour : Colourless-white.

Odour : Odourless.

Odour threshold : No data available

pH : 1.82 (2 %, OECD 122: Partition Coefficient (n-Octanol/Water), pH-Metric Method for Ionisable Substances)

pH solution : No data available

Relative evaporation rate (butylacetate=1) : No data available

Relative evaporation rate (ether=1) : No data available

Melting point : 247 °C

Freezing point : Not applicable

Boiling point : 623 °C (1013 hPa)

Flash point : Not applicable

Auto-ignition temperature : Not applicable

Decomposition temperature : 652 °C

Flammability (solid, gas) : Non flammable.

Vapour pressure : 33 hPa (429 °C)

Vapour pressure at 50 °C : No data available

Relative vapour density at 20 °C : Not applicable

Relative density : 3.9 (20 °C)

Relative density of saturated gas/air mixture : No data available

Density : 3900 kg/m³ (20 °C)

Relative gas density : No data available

Solubility	:	Soluble in water. Soluble in ethanol. Soluble in ether. Soluble in acetone. Soluble in aromatic hydrocarbons. Soluble in ethylacetate. Soluble in isopropanol. Soluble in methyl ethyl ketone. Soluble in pyridine. Soluble in sodium hydroxide solution. Soluble in hydrogenchloride. Water: 17.8 g/100ml (20 °C)
Partition coefficient n-octanol/water (Log Pow)	:	-2.1506 (Calculated, Other)
Partition coefficient n-octanol/water (Log Kow)	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Explosive limits	:	Not applicable
Lower explosive limit (LEL)	:	No data available
Upper explosive limit (UEL)	:	No data available

9.2. Other information

VOC content	:	Not applicable (inorganic)
Other properties	:	Hygroscopic. Acid reaction.

SECTION 10: Stability and reactivity

10.1. Reactivity

Oxidizes slowly on exposure to air. Reacts violently with (strong) oxidizers: (increased) risk of fire/explosion. May be corrosive to metals. Reacts with (strong) acids.

10.2. Chemical stability

Hygroscopic. Unstable on exposure to air.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	Harmful if swallowed.
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Not classified

STANNOUS CHLORIDE (7772-99-8)	
LD50 oral rat	1910.1 mg/kg bodyweight (Equivalent or similar to OECD 423, Rat, Male, Experimental value, Oral)
LC50 inhalation rat (mg/l)	2 mg//l air (OECD 436: Acute inhalation toxicity-acute toxic class method, 4 h, Rat, Male / female, Experimental value, Inhalation (dust))

Skin corrosion/irritation	:	Causes severe skin burns. pH: 1.82 (2 %, OECD 122: Partition Coefficient (n-Octanol/Water), pH-Metric Method for Ionisable Substances)
Serious eye damage/irritation	:	Causes serious eye damage. pH: 1.82 (2 %, OECD 122: Partition Coefficient (n-Octanol/Water), pH-Metric Method for Ionisable Substances)
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	:	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	:	Not classified

Potential adverse human health effects and symptoms : Harmful if swallowed. Causes severe skin burns. Slightly harmful in contact with skin. May cause respiratory irritation. Harmful if inhaled. Causes serious eye damage. Caution! Substance is absorbed through the skin.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Very toxic to aquatic life.

Ecology - air : Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).

Ecology - water : Harmful to crustacea. Harmful to crustacea with long lasting effects. Harmful to fishes. Groundwater pollutant. Acute toxicity algae or other aquatic plants: insufficient data available. pH shift. Hydrolysis in water.

Hazardous to the aquatic environment, short-term (acute) : Very toxic to aquatic life.

Hazardous to the aquatic environment, long-term (chronic) : Not classified

STANNOUS CHLORIDE (7772-99-8)	
EC50 Daphnia 1	22 mg/l (48 h, Daphnia magna, Static system, Fresh water, Experimental value, Tin)
BCF other aquatic organisms 1	0.76 – 6.41 (30 day(s), Mollusca, Static system, Salt water, Experimental value, Cinetic)
Partition coefficient n-octanol/water (Log Pow)	-2.1506 (Calculated, Other)

12.2. Persistence and degradability

STANNOUS CHLORIDE (7772-99-8)	
Persistence and degradability	Readily biodegradable in water.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

12.3. Bioaccumulative potential

STANNOUS CHLORIDE (7772-99-8)	
BCF other aquatic organisms 1	0.76 – 6.41 (30 day(s), Mollusca, Static system, Salt water, Experimental value, Cinetic)
Partition coefficient n-octanol/water (Log Pow)	-2.1506 (Calculated, Other)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

STANNOUS CHLORIDE (7772-99-8)	
Mobility in soil	No additional information available
Partition coefficient n-octanol/water (Log Pow)	-2.1506 (Calculated, Other)
Ecology - soil	No (test)data on mobility of the substance available.

12.5. Other adverse effects

Ozone : Not classified

Other adverse effects : No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

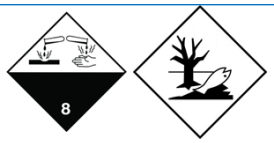
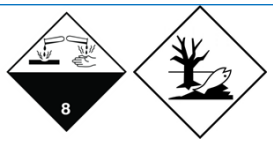
Product/Packaging disposal recommendations : Do not discharge into drains or the environment. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle/reuse. Remove to an authorized dump (Class I). Precipitate/make insoluble.

Additional information : Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

SECTION 14: Transport information

In accordance with SANS / IMDG / IATA

SANS	IMDG	IATA
14.1. UN number		
3260	3260	3260
14.2. Proper Shipping Name		
CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.	Corrosive solid, acidic, inorganic, n.o.s.

SANS	IMDG	IATA
14.3. Transport hazard class(es)		
8	8	8
		 Not applicable
14.4. Packing group		
II	II	II
14.5. Environmental hazards		
Dangerous for the environment : Yes	Dangerous for the environment : No :	Dangerous for the environment : No
No supplementary information available		

14.6. Special precautions for user

- SANS

Transport regulations (UN)	:	Subject to the provisions
Special provisions (SANS)	:	274
Limited quantities (SANS)	:	1 kg
Limited quantities (SANS)	:	1 kg
Packagings, large packagings and IBCs Packing instructions (SANS)	:	P002, IBC08
Packagings, large packagings and IBCs Special packing instructions (SANS)	:	B2, B4
Portable tank and bulk containers instructions (SANS)	:	T3
Portable tank and bulk container special provisions (SANS)	:	TP33

- IMDG

Transport regulations (IMDG)	:	Subject to the provisions
Special provisions (IMDG)	:	274
Limited quantities (IMDG)	:	1 kg
Excepted quantities (IMDG)	:	E2
Packing instructions (IMDG)	:	P002
IBC packing instructions (IMDG)	:	IBC08
IBC special provisions (IMDG)	:	B21, B4
Tank instructions (IMDG)	:	T3
Tank special provisions (IMDG)	:	TP33
EmS-No. (Fire)	:	F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	:	S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES
Stowage category (IMDG)	:	B
Properties and observations (IMDG)	:	Causes burns to skin, eyes and mucous membranes.

- IATA

Transport regulations (IATA)	:	Subject to the provisions
PCA Excepted quantities (IATA)	:	E2
PCA Limited quantities (IATA)	:	Y844
PCA limited quantity max net quantity (IATA)	:	5kg
PCA packing instructions (IATA)	:	859
PCA max net quantity (IATA)	:	15kg
CAO packing instructions (IATA)	:	863
CAO max net quantity (IATA)	:	50kg
Special provisions (IATA)	:	A3, A803
ERG code (IATA)	:	8L

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. Safety, health, and environmental national regulations specific for the product

Regulatory reference : SANS 10234:2008; SANS 11014:2010; SANS 10228:2012;SANS 10229:2010; SANS 10232(1,2,4), SANS 10231:2018; Occupational Health and Safety Act 85 of 1993; National Road Traffic Act 93 of 1996.

SECTION 16: Other information

Issue date : 13/02/2020

Revision date : 13/02/2025

Full text of H-statements:

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.

SDS South Africa

The data provided in this Safety Data Sheet (SDS) is correct to the best of our knowledge. The data relates to the specific product as named and is ntended as a guide to the safe handling of the product in all its facets. The data may no longer be valid if the product is used in any process or in combination with other products.This SDS is not a quality specification nor any form of guarantee.