

SECTION 1: Identification

1.1. Identification

Product form	: Substance
Substance name	: Stannous Chloride, Dihydrate
CAS-No.	: 10025-69-1
Product code	: LC25170
Formula	: SnCl ₂ .2H ₂ O
Synonyms	: tin chloride (SnCl ₂), dihydrate / tin dichloride, dihydrate

1.2. Recommended use and restrictions on use

Use of the substance/mixture	: For laboratory and manufacturing use only.
Recommended use	: Laboratory chemicals
Restrictions on use	: Not for food, drug or household use

1.3. Supplier

LabChem, Inc.
1010 Jackson's Pointe Ct.
Zelienople, PA 16063 - USA
T 412-826-5230 - F 724-473-0647
info@labchem.com - www.labchem.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 or +1-703-741-5970

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Acute toxicity (oral) Category 4	H302 Harmful if swallowed
Acute toxicity (inhalation:dust,mist) Category 4	H332 Harmful if inhaled
Skin corrosion/irritation Category 1	H314 Causes severe skin burns and eye damage
Serious eye damage/eye irritation Category 1	H318 Causes serious eye damage
Hazardous to the aquatic environment - Acute Hazard Category 3	H402 Harmful to aquatic life
Full text of H statements : see section 16	

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger

Hazard statements (GHS US) : H302+H332 - Harmful if swallowed or if inhaled
H314 - Causes severe skin burns and eye damage
H402 - Harmful to aquatic life

Precautionary statements (GHS US) : P260 - Do not breathe dust.
P264 - Wash exposed skin thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, eye protection.
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 - IF ON SKIN (or hair): Remove/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.

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P310 - Immediately call a poison center or doctor/physician.
P363 - Wash contaminated clothing before reuse.
P405 - Store locked up.
P501 - Dispose of contents/container to comply with local, state and federal regulations.

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : None under normal conditions.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%	GHS US classification
Stannous Chloride, Dihydrate (Main constituent)	(CAS-No.) 10025-69-1	100	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Corr. 1, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402

Full text of hazard classes and 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 : Observe (own) safety. If possible, approach victim and check vital functions. In case of injury and/or intoxication, call the European emergency number 112. Treat symptoms starting with most life-threatening injuries and disorders. Keep victim under observation, possibility of delayed symptoms.

First-aid measures after inhalation : Remove victim into fresh air. Immediately consult a doctor/medical service.

First-aid measures after skin contact : If possible, wipe up/dry remove chemical. Then rinse/shower immediately for 30 minutes with (lukewarm) water. Cut clothing; never remove burnt clothing from the wound. Do not give any pain medication. Consult a doctor/medical service.

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. Consult a doctor/medical service.

First-aid measures after ingestion : Rinse mouth with water. Immediately consult a doctor/medical service. Do not wait for symptoms to occur to consult Poison Center.

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

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

Symptoms/effects after inhalation : AFTER INHALATION OF DUST: Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Respiratory difficulties. Coughing. Dry/sore throat. EXPOSURE TO HIGH CONCENTRATIONS: Corrosion of the upper respiratory tract.

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

Symptoms/effects after eye contact : Corrosion of the eye tissue.

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

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

4.3. Immediate medical attention and special treatment, if necessary

No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Adapt extinguishing media to the environment for surrounding fires.

5.2. Specific hazards arising from the chemical

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.

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Hazardous decomposition products in case of fire : On heating/burning: release of toxic and corrosive gases/vapours (hydrogen chloride) and formation of metal oxides.

5.3. Special protective equipment and precautions for fire-fighters

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 : Dilute toxic gases with water spray. 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: self-contained breathing apparatus (EN 136 + EN 137).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Gloves (EN 374). Face shield (EN 166). Corrosion-proof suit (EN 14605). Dust cloud production: self-contained breathing apparatus (EN 136 + EN 137).

Emergency procedures : Mark the danger area. Prevent dust cloud formation. No naked flames. Wash contaminated clothes.

Measures in case of dust release : In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection. Do not breathe dust.

Emergency procedures : Stop release. Ventilate area.

6.2. Environmental precautions

Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

For containment : Contain released substance, pump into suitable containers. Plug the leak, cut off the supply. Dam up the solid spill. Knock down/dilute dust cloud with water spray.

Methods for cleaning up : Prevent dust cloud formation. 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.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : 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. Clean contaminated clothing. Keep container tightly closed. Do not discharge the waste into the drain.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Incompatible products : Strong oxidizers. Strong acids. Strong bases. Halogens. alcohols.

Incompatible materials : May be corrosive to metals.

Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources.

Prohibitions on mixed storage : KEEP SUBSTANCE AWAY FROM: combustible materials. oxidizing agents. strong acids. metals. halogens. alcohols.

Storage area : Meet the legal requirements. Store in a dry area. May be stored under inert gas.

Special rules on packaging : SPECIAL REQUIREMENTS: closing. 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

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USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	2 mg/m ³ (Inhalable fraction)
USA - OSHA - Occupational Exposure Limits	
OSHA PEL (TWA) [1]	2 mg/m ³
USA - IDLH - Occupational Exposure Limits	
IDLH	100 mg/m ³ as Sn
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (TWA)	2 mg/m ³

8.2. Appropriate engineering controls

Appropriate engineering controls : Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Chemical resistant apron. Gloves. Safety glasses. Dust formation: dust mask.

Materials for protective clothing:

GIVE EXCELLENT RESISTANCE: nitrile rubber. GIVE GOOD RESISTANCE: butyl rubber. neoprene. PVC

Hand protection:

Protective gloves against chemicals (EN 374)

Eye protection:

Face shield (EN 166). In case of dust production: protective goggles (EN 166)

Skin and body protection:

Corrosion-proof clothing (EN 14605)

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 (EN 136 + EN 137)

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Crystalline solid.
Color	: Colourless-white
Odor	: Irritating/pungent odour Almost odourless
Odor threshold	: No data available
pH	: 1.82 (2 %, 20 °C, OECD 122: Partition Coefficient (n-Octanol/Water), pH-Metric Method for Ionisable Substances)
Melting point	: 247 °C (Anhydrous form, 1013 hPa)
Freezing point	: No data available
Boiling point	: 623 °C (1013 hPa, Anhydrous form)
Flash point	: Not applicable
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available

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Vapor pressure	: 33 hPa (429 °C, Anhydrous form)
Relative vapor density at 20 °C	: Not applicable (solid)
Relative density	: 3.9 (20 °C, Anhydrous form)
Density	: 3900 kg/m ³ (20 °C, Anhydrous form)
Molecular mass	: 225.63 g/mol
Solubility	: Soluble in water. Soluble in ethanol. Soluble in ether. Soluble in acetone. Soluble in ethylacetate. Soluble in sodium hydroxide solution. Soluble in hydrochloric acid. Water: 17.8 g/100ml (20 °C, Anhydrous form)
Log Pow	: -2.1506 (Anhydrous form, Calculated, KOWWIN)
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available in the literature
No data available	Viscosity, kinematic : Not applicable (solid)
Viscosity, dynamic	: Not applicable (solid)
Explosion limits	: No data available
Explosive properties	: Not classified.
Oxidizing properties	: Not oxidising.

9.2. Other information

VOC content	: Not applicable (inorganic)
Other properties	: Substance has acid reaction.

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Unstable on exposure to air.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Incompatible materials. Air contact.

10.5. Incompatible materials

Strong bases. Strong oxidizers. alcohols. Halogens.

10.6. Hazardous decomposition products

Hydrogen chloride.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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

Stannous Chloride, Dihydrate (10025-69-1)	
LD50 oral rat	700 mg/kg (RTECS)
LC50 Inhalation - Rat	2 mg/l (OECD 436: Acute inhalation toxicity-acute toxic class method, 4 h, Rat, Male / female, Experimental value, Inhalation (dust))
ATE US (oral)	700 mg/kg body weight
ATE US (vapors)	2 mg/l/4h
ATE US (dust, mist)	2 mg/l/4h

Skin corrosion/irritation	: Causes severe skin burns. pH: 1.82 (2 %, 20 °C, OECD 122: Partition Coefficient (n-Octanol/Water), pH-Metric Method for Ionisable Substances)
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Serious eye damage/irritation	: Causes serious eye damage. pH: 1.82 (2 %, 20 °C, OECD 122: Partition Coefficient (n-Octanol/Water), pH-Metric Method for Ionisable Substances)
Respiratory or skin sensitization	: 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	: Not applicable (solid)
Likely routes of exposure	: Skin and eye contact. Inhalation.
Potential Adverse human health effects and symptoms	: Harmful if swallowed. Causes severe skin burns. Slightly harmful in contact with skin. Harmful if inhaled. May cause respiratory irritation. Causes serious eye damage. Caution! Substance is absorbed through the skin.
Symptoms/effects after inhalation	: AFTER INHALATION OF DUST: Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Respiratory difficulties. Coughing. Dry/sore throat. EXPOSURE TO HIGH CONCENTRATIONS: Corrosion of the upper respiratory tract.
Symptoms/effects after skin contact	: Caustic burns/corrosion of the skin.
Symptoms/effects after eye contact	: Corrosion of the eye tissue.
Symptoms/effects after ingestion	: Burns to the gastric/intestinal mucosa. Possible esophageal perforation.
Chronic symptoms	: Skin rash/inflammation. Lung tissue affection/degeneration.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - air	: Not included in the list of substances which may contribute to the greenhouse effect (IPCC). 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 (Daphnia). Harmful to crustacea (Daphnia) with long lasting effects. Groundwater pollutant. Inhibits photosynthesis of algae. May cause eutrophication at very low concentration. Harmful to algae. pH shift. Hydrolysis in water.

Stannous Chloride, Dihydrate (10025-69-1)

EC50 Daphnia 1	22 mg/l (48 h, Daphnia magna, Static system, Fresh water, Experimental value, Anhydrous form)
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12.2. Persistence and degradability

Stannous Chloride, Dihydrate (10025-69-1)

Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

12.3. Bioaccumulative potential

Stannous Chloride, Dihydrate (10025-69-1)

BCF other aquatic organisms 1	0.76 – 6.41 (30 day(s), Mollusca, Static system, Salt water, Experimental value, Anhydrous form)
Log Pow	-2.1506 (Anhydrous form, Calculated, KOWWIN)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

Stannous Chloride, Dihydrate (10025-69-1)

Ecology - soil	No (test)data on mobility of the substance available.
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12.5. Other adverse effects

No additional information available

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SECTION 13: Disposal considerations

13.1. Disposal methods

- Waste disposal recommendations : Do not discharge into drains or the environment. Dispose of at authorized waste collection point. 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.
- 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

Department of Transportation (DOT)

In accordance with DOT

- Transport document description : UN3260 Corrosive solid, acidic, inorganic, n.o.s. (Stannous Chloride, Dihydrate), 8, III
- UN-No.(DOT) : UN3260
- Proper Shipping Name (DOT) : Corrosive solid, acidic, inorganic, n.o.s.
- Transport hazard class(es) (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136
- Packing group (DOT) : III - Minor Danger
- Hazard labels (DOT) : 8 - Corrosive



- DOT Packaging Non Bulk (49 CFR 173.xxx) : 213
- DOT Packaging Bulk (49 CFR 173.xxx) : 240
- DOT Symbols : G - Identifies PSN requiring a technical name
- DOT Special Provisions (49 CFR 172.102) : IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2).
IP3 - Flexible IBCs must be sift-proof and water-resistant or must be fitted with a sift-proof and water-resistant liner.
T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2)
TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.
- DOT Packaging Exceptions (49 CFR 173.xxx) : 154
- DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 25 kg
- DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 100 kg
- DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
- Other information : No supplementary information available.

Transport by sea (IMDG)

- UN-No. (IMDG) : 3260
- Proper Shipping Name (IMDG) : corrosive solid, acidic, inorganic, n.o.s.
- Class (IMDG) : 8 - Corrosive substances

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Packing group (IMDG)	: II - substances presenting medium danger
EmS-No. (1)	: F-A
EmS-No. (2)	: S-B

Air transport (IATA/ICAO)

UN-No. (IATA)	: 3260
Proper Shipping Name (IATA)	: corrosive solid, acidic, inorganic, n.o.s.
Class (IATA)	: 8 - Corrosives
Packing group (IATA)	: II - Medium Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

Stannous Chloride, Dihydrate (10025-69-1)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

SARA Section 311/312 Hazard Classes	Health hazard - Acute toxicity (any route of exposure) Health hazard - Skin corrosion or Irritation Health hazard - Serious eye damage or eye irritation
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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, except for:

Stannous Chloride, Dihydrate	CAS-No. 10025-69-1	100%
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15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

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

SECTION 16: Other information

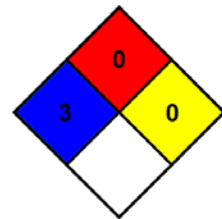
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Revision date : 08/26/2021

Full text of H- and EUH-statements: see section 16:

H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H332	Harmful if inhaled
H402	Harmful to aquatic life

NFPA health hazard	: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.
NFPA fire hazard	: 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.
NFPA reactivity	: 0 - Material that in themselves are normally stable, even under fire conditions.



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Hazard Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 2 Moderate Hazard - Materials that are unstable and may undergo violent chemical changes at normal temperature and pressure with low risk for explosion. Materials may react violently with water or form peroxides upon exposure to air.

Personal protection : F
F - Safety glasses, Gloves, Synthetic apron, Dust respirator

SDS US LabChem

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