Stannous Chloride

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 03/13/2015

SECTION 1: Identification of the substance/mixture

1.1. Product identifier

Product form	:	Substance
Substance name	:	Stannous Chloride
Formula	:	$SnCl_2$
Molecular weight	:	189.62 g/mol
CAS No.	:	7772-99-8
Product code	:	LW-SNCL2
Synonyms	:	Tin(II) Chloride

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

Use of the substance/mixture	:	Laboratory chemicals, Synthesis of substances

1.3. Emergency telephone number

Emergency number	:	1.800.424.9300 (USA) +1.703.527.3887 (INT)

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Inhalation (Category 4), H332

Skin corrosion (Category 1B), H314

Serious eye damage (Category 1), H318

Skin sensitization (Category 1), H317

Germ cell mutagenicity (Category 2), H341

Reproductive toxicity (Category 2), H361

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

Specific target organ toxicity - repeated exposure, Oral (Category 2), Cardio-vascular system, H373

Acute aquatic toxicity (Category 2), H401

Chronic aquatic toxicity (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2. GHS Label elements, including precautionary statements

Pictogram :

Signal word : Danger

Hazard statement(s)		
H314	:	Causes severe skin burns and eye damage.
H317	:	May cause an allergic skin reaction.
H318	:	Causes serious eye damage.
H332	:	Harmful if inhaled.
H335	:	May cause respiratory irritation.
H341	:	Suspected of causing genetic defects.
H361	:	Suspected of damaging fertility or the unborn child.
H373	:	May cause damage to organs (Cardio-vascular system) through prolonged or repeated exposure if swallowed.
H401	:	Toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
Precautionary statement(s)		
P201	:	Obtain special instructions before use.
P202	:	Do not handle until all safety precautions have been read and understood.
P260	:	Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P264	:	Wash skin thoroughly after handling.
P271	:	Use only outdoors or in a well-ventilated area.
P272	:	Contaminated work clothing should not be allowed out of the workplace.
P273	:	Avoid release to the environment.
P280	:	Wear protective gloves/ protective clothing/ eye protection/ face protection.
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 + P310	:	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
	:	
P305 + P351 + P338 + P310	:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
P308 + P313	:	IF exposed or concerned: Get medical advice/ attention.

P333 + P313	:	If skin irritation or rash occurs: Get medical advice/ attention.
P363	:	Wash contaminated clothing before reuse.
P391	:	Collect spillage.
P403 + P233	:	Store in a well-ventilated place. Keep container tightly closed.
P405	:	Store locked up.
P501	:	Dispose of contents/ container to an approved waste disposal plant.

2.3. Hazards not otherwise classified (HNOC) or not covered by GHS

none

SECTION 3: Composition/information on ingredients

3.1. Substances

Synonyms	:	$SnCl_2$
Formula	:	Tin(II) Chloride
Molecular Weight	:	189.62 g/mol
CAS-No.	:	7772-99-8

Hazardous components

Component	Classification	Concentration
Stannous Chloride	Acute Tox. 4; Skin Corr. 1B; Eye Dam. 1; Skin Sens. 1; Muta. 2; Repr. 2; STOT SE 3; STOT RE 2; Aquatic Acute 2; Aquatic Chronic 1; H314, H317, H318, H332, H335, H341, H361, H373, H401, H410	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: Description of first aid measures

4.1. Description of first aid measures

General advice	:	Move out of dangerous area.Consult a physician. Show this safety data sheet to the doctor in attendance.
First-aid measures after inhalation	:	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

First-aid measures after skin contact	:	Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.
First-aid measures after eye contact	:	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.
First-aid measures after ingestion	:	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

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

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Hydrogen chloride gas, Tin/tin oxides.

5.3. Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4. More Information

No data available.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3. Methods and material for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4. Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.

Provide appropriate exhaust ventilation at places where dust is formed.

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For precautions see section 2.2.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Moisture sensitive. Store under inert gas. Keep in a dry place.

Storage class (TRGS 510): Non-combustible, corrosive hazardous materials

7.3. Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Stannous Chloride	7772-99-8	TWA	2.000000 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	2.000000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Eye & Upper Respiratory Tract irritation Headache Pneumoconiosis Nausea varies		
		TWA	2.000000 mg/m3	USA. NIOSH Recommended Exposure Limits

		TWA	2.000000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Pneumoconiosis (or Stannosis) varies		
		TWA	2 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	2 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Pneumoconiosis (or Stannosis) varies		
		TWA	2 mg/m3	USA. NIOSH Recommended Exposure Limits

8.2. Exposure controls

Appropriate engineering controls : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

8.3. Personal protective equipment

Eye protection : Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin Protection : Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
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Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

		data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.
Body protection	:	Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection	:	Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Environmental exposure controls	:	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	:	Form: flake/powder Color: off-white
Odor	:	No data available
Odor Threshold	:	No data available
pH	:	< 1 at 50 g/l
Melting point/freezing point	:	Melting point/range: 246 °C (475 °F) - lit.
Initial boiling point and boiling range	:	652 °C (1,206 °F) - lit.
Flash point	:	Not applicable
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available

Upper/lower flammability or explosive limits	:	No data available
Vapor pressure	:	No data available
Vapor density	:	No data available
Relative density	:	3.950 g/cm3
Water solubility	:	1,780 g/l at 10 °C (50 °F) - soluble
Partition coefficient: n-octanol/water	:	log Pow: ca.-2.149
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

9.2. Other safety information

Bulk density	:	3.95 g/l

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid

Avoid moisture.

10.5. Incompatible materials

Strong bases, Strong oxidizing agents, Sodium/sodium oxides, Potassium, Hydrogen peroxide, Bromine trifluoride, Hydrazine, Halides, Strong reducing agents, calcium acetylide.

10.6. Hazardous decomposition products

Other decomposition products - No data available

In the event of fire: see section 5.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	:	No data available

		LC50 Inhalation - Rat - male and female - 4 h - 2 mg/l (OECD Test Guideline 436) Remarks: Calculation method Dermal: No data available No data available
Skin corrosion/irritation	:	Causes skin burns.
Serious eye damage/irritation	:	Eyes - Rabbit Result: Severe eye irritation
Respiratory or skin sensitization	:	May cause sensitization by skin contact.
Germ cell mutagenicity	:	In vitro tests showed mutagenic effects

Carcinogenicity

This is or contains a component that has been reported to be carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification. Possible human carcinogen.

IARC:	:	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH:	:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP:	:	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA:	:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity	:	Presumed human reproductive toxicant Reproductive toxicity - Rat - Oral Effects on Newborn: Viability index (e.g., # alive at day 4 per # born alive). No data available
Specific target organ toxicity (single exposure)	:	May cause respiratory irritation.
Specific target organ toxicity (repeated exposure)	:	Oral - May cause damage to organs through prolonged or repeated exposure. - Cardio-vascular system
Aspiration hazard	:	No data available
Additional Information	:	RTECS: XP8700000

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Cough, Shortness of breath, Headache, Nausea

SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish	:	EC10 - Oncorhynchus mykiss (rainbow trout) - 0.076 mg/l - 27 d LC50 - other fish - 9 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 - Daphnia (water flea) - 31 - 88 mg/l - 48 h

12.2. Persistence and degradability

Biodegradability	:	The methods for determining the biological degradability are not applicable to inorganic substances.
12.3. Bioaccumulative potential	:	No data available
12.3. Mobility in soil	:	No data available
12.4. Results of PBT and vPvB assessment	:	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
12.6. Other adverse effects	:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects. No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product	:	Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.
Contaminated Packaging	:	Dispose of as unused product.

SECTION 14: Transport information

DOT (US)

UN number	:	3260
Class	:	8
Packing group	:	III

Proper shipping name	:	Corrosive solid, acidic, inorganic, n.o.s. (Tin dichloride)
Reportable Quantity (RQ)	:	no data available
Poison Inhalation Hazard	:	No

IMDG

UN number	:	3260
Class	:	8
Packing group	:	III
EMS-No		F-A, S-B
Proper shipping name	:	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Tin dichloride)

IATA

UN number	:	3260
Class	:	8
Packing group	:	III
Proper shipping name	:	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Tin dichloride)

SECTION 15: Regulatory information

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

Tin dichloride	CAS-No.	Revision Date
	7772-99-8	1993-04-24

Pennsylvania Right To Know Components

Tin dichloride	CAS-No.	Revision Date
	7772-99-8	1993-04-24

New Jersey Right To Know Components

Tin dichloride	CAS-No.	Revision Date
	7772-99-8	1993-04-24

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

Acute Tox.	:	Acute toxicity
Aquatic Acute	:	Acute aquatic toxicity
Aquatic Chronic	:	Chronic aquatic toxicity
Eye Dam.	:	Serious eye damage
H314	:	Causes severe skin burns and eye damage.
H317	:	May cause an allergic skin reaction.
H318	:	Causes serious eye damage.
H332	:	Harmful if inhaled.
H335	:	May cause respiratory irritation.
H341	:	Suspected of causing genetic defects.
H361	:	Suspected of damaging fertility or the unborn child.
H373	:	May cause damage to organs (/$/*_ORG_REP_ORAL/$/) through prolonged or repeated exposure if swallowed.
H401	:	Toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
Muta.	:	Germ cell mutagenicity
Repr.	:	Reproductive toxicity

HMIS Rating

Health Hazard	:	2
Chronic Health Hazard	:	*
Flammability	:	0
Physical Hazard	:	0

NFPA Rating

Health hazard	:	2
Fire Hazard	:	0
Reactivity Hazard	:	0

Further Information

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