



Safety Data Sheet

Tin (II) chloride dihydrate

Section 1: Chemical Product and Company Identification

Product Name: Tin(II) chloride dihydrate

Catalog Codes: 492

CAS#: 10025-69-1

RTECS: XP8850000

Synonym: Stannous chloride dihydrate

Chemical Name: Stannous chloride dihydrate

Chemical Formula: $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$

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Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Tin(II) chloride dihydrate	10025-69-1	100

Toxicological Data on Ingredients: LD50 Oral - Rat - male - 1.910 mg/kg.

Section 3: Hazards Identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Corrosive to Metals (Category 1), H290

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Inhalation (Category 4), H332

Skin corrosion (Sub-category 1B), H314

Serious eye damage (Category 1), H318

Skin sensitization (Category 1), H317

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335
Specific target organ toxicity - repeated exposure, Oral (Category 2), Cardio-vascular system, H373

Short-term (acute) aquatic hazard (Category 1), H400

Long-term (chronic) aquatic hazard (Category 1), H410

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

Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word	Danger
Hazard statement(s)	
H290	May be corrosive to metals.
H302 + H332	Harmful if swallowed or if inhaled.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.
H373	May cause damage to organs (Cardio-vascular system) through prolonged or repeated exposure if swallowed.
H410	Very toxic to aquatic life with long lasting effects.
Precautionary statement(s)	
P260	Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Supplemental Hazard Statements	none

Reduced Labeling (<= 125 ml)

Pictogram



Signal word	Danger
Hazard statement(s)	
H317	May cause an allergic skin reaction.
H314	Causes severe skin burns and eye damage.
Precautionary statement(s)	
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Supplemental Hazard Statements	none
Other hazards	
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.	

Section 4: First Aid Measures
Description of first-aid measures
General advice First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.
If inhaled After inhalation: fresh air. Call in physician.
In case of skin contact In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.
In case of eye contact After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.
If swallowed After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.
Most important symptoms and effects, both acute and delayed The most important known symptoms and effects are described in the labelling (see section 3) and/or in section 11
Indication of any immediate medical attention and special treatment needed No data available

Section 5: Firefighting measures
Extinguishing media
Suitable extinguishing media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture

Nature of decomposition products not known.

Not combustible.

Fire may cause evolution of:

Hydrogen chloride gas

Ambient fire may liberate hazardous vapours.

Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact.

Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10).

Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

Reference to other sections

For disposal see section 13.

Section 7: Handling and Storage

Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 3.

Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Dry.

Recommended storage temperature see product label.

Storage class

Storage class (TRGS 510): 8B: Non-combustible, corrosive hazardous materials

Section 8: Exposure Controls/Personal Protection

Control parameters

Ingredients with workplace control parameters

Exposure controls

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested:KCL 741 Dermatril® L

Body Protection

protective clothing

Respiratory protection

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type P2

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

Control of environmental exposure

Do not let product enter drains.

Section 9: Physical and Chemical Properties

Information on basic physical and chemical properties

a) Appearance	Form: solid Color: white
b) Odor	odorless
c) Odor Threshold	Not applicable
d) pH	1-2 (H ₂ O, 20°C)
e) Melting point/freezing point	Melting point: 38 °C (anhydrous substance)
f) Initial boiling point and boiling range	623 °C (anhydrous substance)
g) Flash point	Not applicable
h) Evaporation rate	No data available
i) Flammability (solid,gas)	The product is not flammable.
j) Upper/lower flammability or	No data available

explosive limits

k) Vapor pressure	No data available
l) Vapor density	No data available
m) Density	2,71 g/cm ³ at 20 °C
Relative density	No data available
n) Water solubility	1187 g/l at 20 °C – soluble
o) Partition coefficient: n-octanol/water	No data available
p) Autoignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

Other safety information

Bulk density ca.1250 kg/m³

Section 10: Stability and Reactivity Data

Reactivity

No data available

Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

Possibility of hazardous reactions

Violent reactions possible with:

Strong acids

hydrogen peroxide

Risk of ignition or formation of inflammable gases or vapours with:

halogen-halogen compounds

Ethylene oxide

carbides

Risk of explosion with:
hydrazine and derivatives
nitrates
Alkali metals
Strong oxidizing agents

Conditions to avoid
no information available

Incompatible materials
No data available

Hazardous decomposition products
In the event of fire: see section 5

Section 11: Toxicological Information

Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male - 1.910 mg/kg
(OECD Test Guideline 423)

Remarks: (anhydrous substance)

LC50 Inhalation - Rat - male and female - 4 h - 2 mg/l - dust/mist

(OECD Test Guideline 436)

Remarks: (anhydrous substance)

Dermal: No data available

No data available

Skin corrosion/irritation

Skin - Rabbit

Result: Corrosive - 4 h

(OECD Test Guideline 404)

Remarks: (anhydrous substance)

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitization

Patch test: - Human

Result: positive

Remarks: (ECHA)

(anhydrous substance)

Germ cell mutagenicity

Test Type: In vitro mammalian cell gene mutation test

Test system: Mouse lymphoma test

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

Remarks: (anhydrous substance)

Test Type: Mutagenicity (mammal cell test): micronucleus.

Species: Mouse

Application Route: Intraperitoneal injection

Result: negative

Remarks: (National Toxicology Program)
(anhydrous substance)

Carcinogenicity

No data available

Reproductive toxicity

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. - Cardiovascular system

Aspiration hazard

No data available

Additional Information

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12: Ecological Information

Toxicity

Toxicity to fish

static test LC50 - other fish - 9 mg/l - 96 h

Remarks: (in analogy to similar products)

The value is given in analogy to the following substances: tin(II) chloride

Toxicity to algae

ErC50 - Skeletonema costatum (marine diatom) - 0,21 mg/l - 72 h

Remarks: (in analogy to similar products)

(Stannous chloride dihydrate)

Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

Bioaccumulative potential

No data available

Mobility in soil

No data available

Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Endocrine disrupting properties

No data available

Other adverse effects

Harmful effect due to pH shift.

Discharge into the environment must be avoided.

Section 13: Disposal Considerations

Waste treatment methods**Product**

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Section 14: Transport Information

UN number

ADR/RID: 3260

IMDG: 3260

IATA: 3260

UN proper shipping name

ADR/RID: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Stannous chloride dihydrate)

IMDG: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Stannous chloride dihydrate)

IATA: Corrosive solid, acidic, inorganic, n.o.s. (Stannous chloride dihydrate)

Transport hazard class(es)

ADR/RID: 8

IMDG: 8

IATA: 8

Packaging group

ADR/RID: II

IMDG: II

IATA: II

Environmental hazards

ADR/RID: yes

IMDG Marine pollutant: yes

IATA: no

Special precautions for user

No data available

Section 15: Other Regulatory Information**Safety, health and environmental regulations/legislation specific for the substance or mixture**

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

National legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances : ENVIRONMENTAL HAZARDS

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

Section 16: Other Information

References: Not available

Other Special Considerations: Not available

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