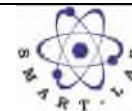


MATERIAL SAFETY DATA SHEET

According to regulation (EU) no.1907/2006

**TIN (II) CHLORIDE DIHYDRATE**

Revision : 01

Date: August 19th, 2022

MSDS Number : 250

Section 1 - Chemical Product and Company Identification

- 1.1 Product Name** : **TIN (II) CHLORIDE DIHYDRATE**
Synonyms : Stannous Chloride dihydrate
CAS No. : 10025-69-1
HS Code : 2827 39 90
Chemical Formula : $\text{SnCl}_2 \cdot 2 \text{H}_2\text{O}$
Molecular Weight : 225.63 g/mol
Product Code : A-2176
Brand : SMART-LAB
- 1.2 Manufacturer** : **PT.Smart-Lab Indonesia**
Address : Ruko Boulevard Taman Tekno Blok E No. 9-11, BSD Serpong, Tangerang - Indonesia
Website : www.smartlabid.com
Email : sales@smartlabid.com
For information : Telp: +62 21- 7588 0205(Hunting), fax: +62-21-7588 0198
Emergency Telephone: +62-21-7588 0205(Hunting)
- 1.3 Application** : General Chemical reagent

Section 2- Hazards Identification

2.1 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

2.2 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

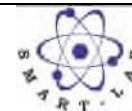
May cause damage to organs (Cardio-vascular system) through prolonged or repeated exposure if swallowed.

H410

Very toxic to aquatic life with long lasting effects.

MATERIAL SAFETY DATA SHEET

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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

2.3 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 3 - Composition, Information on Ingredients

3.1 Substances

Synonyms	: Stannous Chloride dihydrate
Formula	: SnCl ₂ . 2 H ₂ O
Molecular weight	: 225.63 g/mol
CAS-No.	: 10025-69-1
EC-No.	: 231-868-0
Index-No.	: -

3.2 Mixture**Hazardous ingredients according to Regulation (EC) No 1272/2008**

Component	Classification	Concentration
Stannous chloride dihydrate CAS-No. 10025-69-1 EC-No. 231-868-0	Met. Corr. 1; Acute Tox. 4; Skin Corr. 1B; Eye Dam. 1; Skin Sens. 1; STOT SE 3; STOT RE 2; Aquatic Acute 1; Aquatic Chronic 1; H290, H302, H332, H314, H318, H317, H335, H373, H400, H410 M-Factor - Aquatic Acute: 1 - Aquatic Chronic: 1	<=100 %

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

Section 4 - First Aid Measures

4.1 Description of first aid measures**General advice**

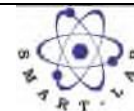
First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance

If inhaled

If breathing stops: immediately apply artificial respiration, if necessary also oxygen. After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

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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.

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**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.

5.2 Special hazards arising from the substance or mixture

Nature of decomposition products not known. Not combustible. Ambient fire may liberate hazardous vapours.

5.3 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

5.4 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

6.1 Personal precautions, protective equipment and emergency procedures

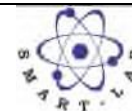
Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

MATERIAL SAFETY DATA SHEET

According to regulation (EU) no.1907/2006

**TIN (II) CHLORIDE DIHYDRATE**

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6.3 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.

6.4 Reference to other sections

For disposal see section 13.

Section 7 - Handling and Storage

7.1 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 2.2.

7.2 Conditions for safe storage, including any incompatibilities**Storage conditions**

No metal containers. Tightly closed. Dry. Air and moisture sensitive. Store under inert gas.

Storage class

Storage class (TRGS 510): 8B: 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**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.

Personal protective equipment**Eye/face 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.

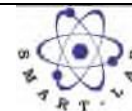
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

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Break through time: 480 min
Material tested: Dermatril® (KCL 740, Size M)

Splash contact

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

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

9.1 Information on basic physical and chemical properties

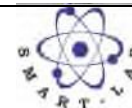
Appearance	Form: Fine crystals and fragments Colour: white
Odour	odorless
Odour Threshold	Not applicable
pH	5.0 - 7.0 at 25 °C
Melting point/freezingpoint	Melting point/range: 37 - 38 °C - dec.
Initial boiling point and boiling range	652 °C - lit
Flash point	Not applicable
Evaporation rate	No data available
Flammability (solid, gas)	The product is not flammable.
Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	2.71 g/cm ³
Water solubility	1.187 g/l at 20 °C - soluble
Partition coefficient: octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available.

9.2 Other safety information

No data available

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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

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

10.4 Conditions to avoid

Exposure to moisture may affect product quality. Exposure to air may affect product quality.

10.5 Incompatible materials

Hydrogen peroxide, Strong bases, Strong oxidizing agents, Bromine trifluoride, Hydrazine, Ethylene oxide, Metals, organic nitrates

10.6 Hazardous decomposition products

In the event of fire: see section 5

Section 11 - Toxicological Information

11.1 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 sensitisation

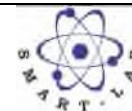
Patch test: - Human

Result: positive

Remarks: (ECHA) (anhydrous substance)

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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

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

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(Stannous chloride dihydrate)

Additional Information

RTECS: XP8850000

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

Section 12 - Ecological Information

12.1 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)

12.2 Persistence and degradability

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

12.3 Bioaccumulative potential

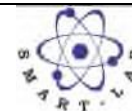
No data available

12.4 Mobility in soil

No data available(Stannous chloride dihydrate)

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According to regulation (EU) no.1907/2006

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12.5 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.

12.6 Other adverse effects

Harmful effect due to pH shift. Discharge into the environment must be avoided.

Section 13 - Disposal Considerations

13.1 Waste treatment methods**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chem scrubber.

Contaminated packaging

Dispose of as unused product.

Section 14 - Transport Information

14.1 UN number

ADR/RID: 3260

IMDG: 3260

IATA: 3260

14.2 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)

14.3 Transport hazard class(es)

ADR/RID: 8

IMDG: 8

IATA: 8

14.4 Packaging group

ADR/RID: II

IMDG: II

IATA: II

14.5 Environmental hazards

ADR/RID: yes

IMDG Marine pollutant: yes

IATA: no

14.6 Special precautions for user**Further information**

No data available

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

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

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

Section 16 - Additional Information

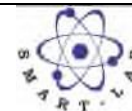
Full text of H-Statements referred to under sections 2 and 3.

H290 May be corrosive to metals.

H302 Harmful if swallowed.

H302 + H332 Harmful if swallowed or if inhaled.

MATERIAL SAFETY DATA SHEET
According to regulation (EU) no.1907/2006

**TIN (II) CHLORIDE DIHYDRATE**

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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.
H373	May cause damage to organs through prolonged or repeated exposure if swallowed.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

National Fire Protection Association (U.S.A.):

Health: 3

Flammability: 0

Reactivity: 1

Revision history :

Date	Rev	Description
Mar 8, 2019	00	-
August 19, 2022	01	thorough revision

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. PT. Smartlab Indonesia shall not be held liable for any damage resulting from handling or from contact with the above product.