

Safety Data Sheet **TIN (II) CHLORIDE Dihydrate**

SDS no. A8Y27Y8U • Version 1.0 • Date of issue: 2023-07-28

SECTION 1: Identification

GHS Product identifier

Product name **TIN (II) CHLORIDE Dihydrate**

Recommended use of the chemical and restrictions on use

Reducing agent in manufacture of chemicals, intermediates, dyes, polymers, phosphors, tin glavanising, silvering mirrors, antisludging agent for lubricating oils, food preservative, stabiliser for perfume in soap, catalyst, soldering flux, sensitising agent for glass, paper and plasitcs, manufacture of lakes, textiles (reducing agent in dyeing, discharge in printing), reagent in analytical chemistry, revivication of yeast sown in must (accelerator) and laboratory reagent.

Supplier's details

Name **ChemSupply Australia Pty Ltd**
Address **38-50 Bedford Street
5013 Gillman South Australia
Australia**

Telephone **08 8440 2000**
email **www.chemsupply.com.au**

Emergency phone number

CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

SECTION 2: Hazard identification

General hazard statement

Classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).

Classified as Hazardous according to the Globally Harmonised System of classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 7

- Acute toxicity, inhalation, Cat. 4
- Acute toxicity, oral, Cat. 4
- Serious eye damage/eye irritation, Cat. 1
- Corrosive to metals, Cat. 1
- Skin corrosion/irritation, Cat. 1B

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- Skin sensitizer, Cat. 1
- Specific target organ toxicity following repeated exposure, Cat. 2
- Specific target organ toxicity following single exposure, Cat. 3

GHS label elements, including precautionary statements

Pictograms



Signal word

Danger

Hazard statement(s)

H290	May be corrosive to metals
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction
H332	Harmful if inhaled
H335	May cause respiratory irritation
H373	May cause damage to organs through prolonged or repeated exposure

Precautionary statement(s)

P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
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 [or 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/doctor/physician
P330	Rinse mouth.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P390	Absorb spillage to prevent material-damage.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P406	Store in a corrosive resistant/... container with a resistant inner liner.
P501	Dispose of contents/container to an approved waste disposal facility

SECTION 3: Composition/information on ingredients

Mixtures

Molecular weight: 225.63

Formed by dissolving tin in hydrochloric acid.

Components

Component	CAS no.	Concentration
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Tin(II) chloride Dihydrate (weight)	10025-69-1	98 - <= 100 %
CLASSIFICATIONS: Acute toxicity, inhalation, Cat. 4; Acute toxicity, oral, Cat. 4; Corrosive to metals, Cat. 1; Skin corrosion/irritation, Cat. 1B; Skin sensitizer, Cat. 1; Specific target organ toxicity following repeated exposure, Cat. 2; Specific target organ toxicity following single exposure, Cat. 3. HAZARDS: H290 - May be corrosive to metals; H302 - Harmful if swallowed; H314 - Causes severe skin burns and eye damage; H317 - May cause an allergic skin reaction; H332 - Harmful if inhaled; H335 - May cause respiratory irritation; H336 - May cause drowsiness or dizziness; H373 - May cause damage to organs [organs] through prolonged or repeated exposure [route].		

SECTION 4: First-aid measures

Description of necessary first-aid measures

General advice	First Aid Facilities: Maintain eyewash fountain and drench facilities in work area.
If inhaled	After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.
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/effects, acute and delayed

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

Indication of immediate medical attention and special treatment needed, if necessary

For advice in an emergency, contact a Poisons Information Centre (Phone Australia 131 126) or a doctor at once.

SECTION 5: Fire-fighting measures

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific hazards arising from the chemical

When heated to decomposition it emits toxic fumes of hydrogen chloride.

Material does not burn. Fire or heat will produce irritating, poisonous and/or corrosive gases.

Special protective actions for fire-fighters

Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. Fight fire from safe location.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures

Methods and materials for containment and cleaning up

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Sweep up and shovel. Do not flush with water. Keep in suitable, closed containers for disposal. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13)

SECTION 7: Handling and storage

Precautions for safe handling

Corrosive liquid. Attacks skin and eyes. Causes burns. Avoid breathing in vapours, mist or fumes. Wear suitable protective clothing, gloves and eye/face protection when mixing and using. Use in designated areas with adequate ventilation. Keep containers tightly closed. Ensure a high level of personal hygiene is maintained when using this product, that is, always wash hands after handling, and before eating, drinking, smoking or using the toilet facilities. Avoid exposure. Do not handle until all safety precautions have been read and understood.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well-ventilated area, out of direct sunlight. Store in suitable, labelled containers. Keep containers tightly closed. Store away from incompatible materials. Ensure that storage conditions comply with applicable local and national regulations.

SECTION 8: Exposure controls/personal protection

Appropriate engineering controls

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, gas, etc.) below recommended exposure limits.

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

Eye/face protection

The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

Skin protection

Clean impervious clothing should be worn. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Hand Protection: Ensure hand protection complies with AS 2161, Occupational protective gloves - Selection, use and maintenance.

Body protection

Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

Respiratory protection

Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state
Appearance
Color

Solid
White to yellow, crystalline mass.
No data available.

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Odor	Odourless.
Odor threshold	No data available.
Melting point/freezing point	38 °C
Boiling point or initial boiling point and boiling range	Decomposes.
Flammability	No data available.
Lower and upper explosion limit/flammability limit	No data available.
Flash point	No data available.
Explosive properties	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Oxidizing properties	No data available.
pH	No data available.
Kinematic viscosity	No data available.
Solubility	[12] Solubility in Water: Very soluble (1187 g/L @ 20 °C). In dilute aqueous solutions it will form insoluble oxychloride.
Partition coefficient n-octanol/water (log value)	[13] Solubility in Organic Solvents: Soluble in methanol.
Vapor pressure	No data available.
Evaporation rate	No data available.
Density and/or relative density	[14] Specific Gravity: 2.71
Relative vapor density	No data available.
Particle characteristics	No data available.

Supplemental information regarding physical hazard classes

No data available.

Further safety characteristics (supplemental)

Absorbs oxygen from air and forms the insoluble oxychloride.

SECTION 10: Stability and reactivity

Reactivity

Stable under normal conditions of storage and handling.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

May react violently with strong oxidizing agents, hydrogen peroxide, bromine trifluoride, calcium carbide, ethylene oxide, hydrazine hydrate, potassium and sodium.

Hazardous Polymerization: Will not occur.

Conditions to avoid

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

Incompatible materials

Strong oxidizing agents, strong acids, halogen-halogen compounds (i.e. bromine trifluoride), calcium carbide, nitrates, alkali metals, hydrogen peroxide, ethylene oxide, hydrazine hydrate, potassium and sodium.

Hazardous decomposition products

Decomposition products include of hydrogen chloride, chloride and tin/tin oxides.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Harmful if swallowed. Symptoms include of headache, nausea, fatigue, dizziness, vomiting. May cause irritation and or burning to the mucous membranes in the lips, mouth, pharynx, oesophagus and gastrointestinal tract causing abdominal pain (cramps), diarrhea, reduced blood pressure, stomach bleeding, collapse and convulsions. Followed by diarrhea and respiratory distress, liver and kidney damage. Material is extremely desctructive to tissue of the mucous membranes and gastrointestinal tract.

Harmful if swallowed. Irritating to mucous lining and respiratory system. May cause sore throat, coughing, laboured breathing, headache, burns or burning sensation, wheezing, laryngitis, nausea and diziness. Further irritation may lead to spasms, inflammation, larynx and bronchi edema, chemical pneumonitis and pulmonary edema. Material is extremely desctructive to tissue of the mucous membranes and upper respiratory tract.

Skin corrosion/irritation

Irritating to skin. Symptoms may include of redness, pain, irritation, inflammation, blistering and dermatitis.

Risk of sensitisation. May be harmful if absorbed through the skin. Material is extremely desctructive to tissue of the mucous membranes and skin.

Serious eye damage/irritation

Irritating to eyes. Inflammation is characterized by redness, pain, watering and itching. Material is desctructive to tissue of the mucous membranes and eyes which may in turn cause blindness or corneal damage.

Respiratory or skin sensitization

May cause an allergic skin reaction

Germ cell mutagenicity

No data available.

Carcinogenicity

No data available.

Reproductive toxicity

No data available.

Summary of evaluation of the CMR properties

No data available.

Specific target organ toxicity (STOT) - single exposure

Specific Target Organ Toxicity Single Exposure Category 3 (respiratory tract irritation)

Specific target organ toxicity (STOT) - repeated exposure

H373 May cause damage to organs (Cardo-vascular system)through prolonged or repeated exposure.

Aspiration hazard

No data available.

Additional information

Chronic Effects: Prolonged inhalation of dust or fumes may result in a benign pneumoconiosis, producing distinctive changes in the lungs with no apparent disability or complications. Prolonged or repeated ingestion may affect the blood system, liver and kidneys. Repeated or prolonged skin contact may cause chronic dermatitis.

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H341 Suspected of causing genetic defects.

When in contact with moisture or mucous membranes (i.e. skin, eyes, nose, mouth, respiratory and gastrointestinal tract), the stannous chloride forms hydrochloric acid which may in turn increase toxicity.

Tin(II) chloride Dihydrate: dog LDLo intravenous 20mg/kg (20mg/kg) "Handbook of Toxicology," 4 vols., Philadelphia, W.B. Saunders Co., 1956-59Vol. 1, Pg. 282, 1955.

rat LD50 intravenous 7830ug/kg (7.83mg/kg) Acta Physiologica Polonica. Vol. 32, Pg. 193, 1981.

[Link to PubMed](#)

SECTION 12: Ecological information

Toxicity

Biological Properties: Harmful due to pH shift.

Persistence and degradability

No data available.

Bioaccumulative potential

No data available.

Mobility in soil

No mobility data available for this product.

Results of PBT and vPvB assessment

No data available.

Endocrine disrupting properties

No data available.

Other adverse effects

Hazardous to the Aquatic Environment - Acute Hazard: Category 1

Hazardous to the Aquatic Environment - Long-Term Hazard: Category 1

SECTION 13: Disposal considerations

Disposal methods

Product disposal

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Other disposal recommendations

Do not discharge this material into waterways, drains and sewers.

SECTION 14: Transport information

ADG (Road and Rail)

UN Number: 3260

Class: 8

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Packing Group: III

Proper Shipping Name: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (CONTAINS TIN(II) CHLORIDE)

Hazchem emergency action code (EAC)

2X

IMDG

UN Number: 3260

Class: 8

Packing Group: III

EMS Number:

Proper Shipping Name: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (CONTAINS TIN(II) CHLORIDE)

IATA

UN Number: 3260

Class: 8

Packing Group: III

Proper Shipping Name: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (CONTAINS TIN(II) CHLORIDE)

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

Australia SUSMP

Poison Schedule: NS

SECTION 16: Other information

Further information/disclaimer

ChemSupply Australia Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon ChemSupply Australia Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of ChemSupply Australia Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

Preparation information

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Standard for the Uniform Scheduling of Medicines and Poisons, Commonwealth of Australia

National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'

Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', July 2020.

Safe Work Australia, 'National Guide for Classifying Hazardous Chemicals', July 2020.

Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants, December 2019

Safe Work Australia, Hazardous Chemical Information System (HCIS), hcis.safeworkaustralia.gov.au

IATA, Dangerous Goods Regulations (DGR)

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IMO, International Maritime Dangerous Goods Code (IMDG)