

# Safety Data Sheet **trans-1,2-DIAMINOCYCLOHEXANE-N,N,N',N'-TETRAACETIC ACID MONOHYDRATE**

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## SECTION 1: Identification

### GHS Product identifier

Product name trans-1,2-DIAMINOCYCLOHEXANE-N,N,N',N'-TETRAACETIC ACID MONOHYDRATE

### Other means of identification

1,2-Cyclohexylenedinitrotetraacetic acid monohydrate  
trans-1,2-DIAMINOCYCLOHEXANE-N,N,N',N'-TETRAACETIC ACID  
MONOHYDRATE AR  
DCTA  
CDTA

### Recommended use of the chemical and restrictions on use

Chelating agent similar to ethylenediaminetetraacetic acid, ligand used to prepare lanthanide shift reagents 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](http://www.chemsupply.com.au)

### Emergency phone number

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

## SECTION 2: Hazard identification

### Classification of the substance or mixture

#### GHS classification in accordance with: UN GHS revision 7

- Acute toxicity, inhalation, Cat. 4
- Serious eye damage/eye irritation, Cat. 2A
- Hazardous to the aquatic environment, long-term (chronic), Cat. 2

#### GHS label elements, including precautionary statements

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#### Pictograms



#### Signal word

#### Warning

#### Hazard statement(s)

H319

Causes serious eye irritation

H332

Harmful if inhaled

H411

Toxic to aquatic life with long lasting effects

#### Precautionary statement(s)

P261

Avoid breathing dust/fume/gas/mist/vapors/spray.

P264

Wash hands thoroughly after handling.

P271

Use only outdoors or in a well-ventilated area.

P273

Avoid release to the environment.

P280

Wear protective gloves/protective clothing/eye protection/face protection.

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.

P312

Call a POISON CENTER/doctor/physician if you feel unwell.

P337+P313

If eye irritation persists: Get medical advice/attention.

P391

Collect spillage.

P501

Dispose of contents/container to an approved waste disposal facility

## SECTION 3: Composition/information on ingredients

#### Mixtures

Molecular weight: 364.35

#### Components

Component	CAS no.	Concentration
(1,2-Cyclohexylenedinitrilo) tetraacetic acid	125572-95-4	100 - 100 % (weight)
CLASSIFICATIONS: Serious eye damage/eye irritation, Cat. 2A; Acute toxicity, inhalation, Cat. 4; Hazardous to the aquatic environment, long-term (chronic), Cat. 2.		
HAZARDS: H319 - Causes serious eye irritation; H332 - Harmful if inhaled; H411 - Toxic to aquatic life with long lasting effects.		

## SECTION 4: First-aid measures

#### Description of necessary first-aid measures

General advice

First Aid Facilities: Maintain eyewash fountain in work area.

If inhaled

Remove from exposure, rest and keep warm. If breathing has stopped, apply artificial respiration. If symptoms develop, obtain medical attention.

In case of skin contact

Wash affected areas with copious quantities of water immediately. Remove contaminated clothing and wash before re-use. Seek medical attention.

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In case of eye contact	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Seek medical attention.
If swallowed	Rinse mouth thoroughly with water immediately. Give plenty of water to drink. Never give anything by mouth to an unconscious person. If swallowed, do NOT induce vomiting. Seek medical attention in severe cases, or if large amounts ingested.

#### 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, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

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## SECTION 5: Fire-fighting measures

#### Suitable extinguishing media

Dry chemical, CO<sub>2</sub>, alcohol resistant foam, water spray or foam.

#### Specific hazards arising from the chemical

Irritating and toxic fumes and gases, nitrogen oxides (NO, NO<sub>2</sub>, NO<sub>x</sub>), carbon monoxide (CO) and carbon dioxide (CO<sub>2</sub>).

#### 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.

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## SECTION 6: Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

Avoid substance contact. Avoid generation of dusts: do not inhale dusts. Ensure supply of fresh air in enclosed rooms.

Wear protective clothing specified for normal operations (see Section 8)

#### Methods and materials for containment and cleaning up

Sweep up (avoid generating dust) and remove to a suitable, clearly labelled container for disposal in accordance with local regulations.

Prevent contamination of soil and water.

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## SECTION 7: Handling and storage

#### Precautions for safe handling

Avoid ingestion and inhalation of dusts. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Use with adequate ventilation. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse.

#### Conditions for safe storage, including any incompatibilities

Store in tightly closed containers, in a cool, dry, well-ventilated area.

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## SECTION 8: Exposure controls/personal protection

#### Appropriate engineering controls

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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

Footwear: Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.

Body Protection: Clean clothing or protective clothing should be worn, preferably with and apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

##### Respiratory protection

If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable vapor/ mist filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements. Reference should be made to Australian Standards AS/ NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

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## SECTION 9: Physical and chemical properties

### Basic physical and chemical properties

Physical state	Solid
Appearance	White, or slightly beige, fine crystals, or crystalline powder.
Color	No data available.
Odor	No data available.
Odor threshold	No data available.
Melting point/freezing point	213-216 °C (decomposes)
Boiling point or initial boiling point and boiling range	No data available.
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	213-216 °C (melting range)
Oxidizing properties	No data available.
pH	No data available.
Kinematic viscosity	No data available.
Solubility	Solubility in Water: Very slightly soluble. Solubility in Organic Solvents: Insoluble in most common organic solvents; partially soluble in dimethyl formamide and dimethyl sulfoxide upon heating.
Partition coefficient n-octanol/water (log value)	No data available.

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Vapor pressure	No data available.
Evaporation rate	No data available.
Density and/or relative density	No data available.
Relative vapor density	No data available.
Particle characteristics	No data available.

#### Supplemental information regarding physical hazard classes

No data available.

#### Further safety characteristics (supplemental)

No data available.

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## SECTION 10: Stability and reactivity

### Reactivity

None under normal use conditions.

### Chemical stability

Stable under normal temperatures, pressures and conditions of use and storage.

### Possibility of hazardous reactions

May form combustible dust concentrations in air

### Conditions to avoid

Heat, flames, sparks, and other sources of ignition, dust generation and incompatible materials.

### Incompatible materials

Strong oxidising agents.

### Hazardous decomposition products

Irritating and toxic fumes and gases, nitrogen oxides, carbon monoxide, carbon dioxide, and possibly hydrogen cyanide.

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## SECTION 11: Toxicological information

### Information on toxicological effects

#### Acute toxicity

The toxicological properties of this substance have not been fully investigated.

Ingestion: May be harmful if swallowed. Causes irritation to the gastrointestinal tract. Only very slightly absorbable via the gastrointestinal tract. Symptoms may include damage of mucous membranes, nausea, vomiting and diarrhoea. Severe exposures may be fatal. Ingestion of large amounts may lead to changes in the blood picture and damage to the kidneys.

Inhalation: May be harmful if inhaled. Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath. Severe exposures may be fatal.

// ----- From the Suggestion report (03/04/2024, 12:56 PM) ----- //

The ATE (gas inhalation) of the mixture is: 4500 ppmV

#### Skin corrosion/irritation

Causes irritation to skin. Symptoms include redness, itching and pain.

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#### Serious eye damage/irritation

Causes irritation, redness, and pain.

#### Respiratory or skin sensitization

No data available.

#### 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

No data available.

#### Specific target organ toxicity (STOT) - repeated exposure

No data available.

#### Aspiration hazard

No data available.

#### Additional information

[2K] Chronic Effects: Repeated or prolonged exposure may affect the blood, and cause damage to the kidneys.

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## SECTION 12: Ecological information

#### Toxicity

Toxic to aquatic life with long lasting effects

#### Persistence and degradability

No data available.

#### Bioaccumulative potential

No data available.

#### Mobility in soil

No data available.

#### Results of PBT and vPvB assessment

No data available.

#### Endocrine disrupting properties

No data available.

#### Other adverse effects

No data available.

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#### SECTION 13: Disposal considerations

##### Disposal methods

##### Product disposal

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers.

##### Other disposal recommendations

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

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#### SECTION 14: Transport information

##### ADG (Road and Rail)

Not dangerous goods

##### IMDG

Not dangerous goods

##### IATA

Not dangerous goods

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#### SECTION 15: Regulatory information

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

##### Australia SUSMP

Poison Schedule: NS

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#### 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.

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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

## **Safety Data Sheet**

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Safe Work Australia, Hazardous Chemical Information System (HCIS), [hcis.safeworkaustralia.gov.au](http://hcis.safeworkaustralia.gov.au)

IATA, Dangerous Goods Regulations (DGR)

IMO, International Maritime Dangerous Goods Code (IMDG)