



# MATERIAL SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Revision Date 08/15/2013

Version 1.1

## SECTION 1. Identification

### Product identifier

Product number	841032
Product name	trans-1,2-Diaminocyclohexane-N,N,N',N'-tetracetic acid monohydrate for synthesis

### Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Chemical for synthesis
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### Details of the supplier of the safety data sheet

Company	EMD Millipore Corporation   290 Concord Road, Billerica, MA 01821, United States of America   SDS Phone Support: +1-978-715-1335   General Inquiries: +1-978-715-4321   Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5)
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Emergency telephone	800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week
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## SECTION 2. Hazards identification

### GHS Classification

Skin irritation, Category 2, H315

Eye irritation, Category 2, H319

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

### GHS-Labeling

*Hazard pictograms*



*Signal Word*

Warning

*Hazard Statements*

H315 Causes skin irritation.

H319 Causes serious eye irritation.

*Precautionary Statements*

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

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P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

## OSHA Hazards

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

## Other hazards

None known.

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## SECTION 3. Composition/information on ingredients

Formula	C <sub>14</sub> H <sub>22</sub> N <sub>2</sub> O <sub>8</sub> * H <sub>2</sub> O (Hill)
CAS-No.	125572-95-4
Molar mass	364.34 g/mol

## Hazardous ingredients

*Chemical Name ( Concentration)*

CAS-No.

*trans-cyclohexane-1,2-dinitrilotetraacetic acid monohydrate ( >= 90 % - <= 100 % )*  
125572-95-4

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## SECTION 4. First aid measures

### Description of first-aid measures

#### *Inhalation*

After inhalation: fresh air.

#### *Skin contact*

After skin contact: wash off with plenty of water. Remove contaminated clothing.

#### *Eye contact*

After eye contact: rinse out with plenty of water. Call in ophthalmologist.

#### *Ingestion*

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

Never give anything by mouth to an unconscious person.

### Most important symptoms and effects, both acute and delayed

irritant effects, Nausea, Vomiting

### Indication of any immediate medical attention and special treatment needed

No information available.

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## SECTION 5. Fire-fighting measures

### Extinguishing media

*Suitable extinguishing media*

Water, Carbon dioxide (CO<sub>2</sub>), Foam, Dry powder

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## *Unsuitable extinguishing media*

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

## **Special hazards arising from the substance or mixture**

Combustible.

Development of hazardous combustion gases or vapors possible in the event of fire.

Fire may cause evolution of:

nitrogen oxides

## **Advice for firefighters**

### *Special protective equipment for fire-fighters*

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.

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## **SECTION 6. Accidental release measures**

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

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

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

Advice for emergency responders: Protective equipment see section 8.

### **Environmental precautions**

Do not empty into 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.

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## **SECTION 7. Handling and storage**

### **Precautions for safe handling**

Observe label precautions.

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

Tightly closed. Dry. Protected from light.

Store at +15°C to +25°C (+59°F to +77°F).

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## **SECTION 8. Exposure controls/personal protection**

### **Exposure limit(s)**

Contains no substances with occupational exposure limit values.

### **Engineering measures**

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

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Version 1.1

## Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

### *Hygiene measures*

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

### *Eye/face protection*

Safety glasses

### *Hand protection*

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

### *Other protective equipment:*

protective clothing

### *Respiratory protection*

required when dusts are generated.

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

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## SECTION 9. Physical and chemical properties

Physical state	powder
Color	white
Odor	characteristic
Odor Threshold	No information available.
pH	No information available.
Melting point	213 °C
Boiling point	No information available.
Flash point	No information available.
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapor pressure	No information available.

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Relative vapor density	No information available.
Relative density	No information available.
Water solubility	at 68 °F ( 20 °C) practically insoluble
Partition coefficient: n-octanol/water	No information available.
Autoignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Bulk density	ca. 500 kg/m <sup>3</sup>

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## SECTION 10. Stability and reactivity

### Reactivity

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

### Chemical stability

Sensitivity to light

### Possibility of hazardous reactions

Violent reactions possible with:

Oxidizing agents

### Conditions to avoid

Strong heating.

### Incompatible materials

no information available

### Hazardous decomposition products

in the event of fire: See section 5.

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## SECTION 11. Toxicological information

### Information on toxicological effects

#### *Likely route of exposure*

Inhalation, Eye contact, Skin contact, Ingestion

#### *Acute oral toxicity*

Symptoms: Nausea, Vomiting

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## *Acute inhalation toxicity*

Symptoms: Possible damages:, mucosal irritations

### *Skin irritation*

Causes skin irritation.

### *Eye irritation*

Causes serious eye irritation.

### *Specific target organ systemic toxicity - single exposure*

The substance or mixture is not classified as specific target organ toxicant, single exposure.

### *Specific target organ systemic toxicity - repeated exposure*

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

### *Aspiration hazard*

Regarding the available data the classification criteria are not fulfilled.

## **Carcinogenicity**

IARC

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

ACGIH

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

## **Further information**

Quantitative data on the toxicity of this product are not available.

Further toxicological data:

Swallowing may result in damage to the following:

mucous membrane

Only very slightly absorbable via the gastrointestinal tract.

After swallowing of large amounts:

Changes in the blood count

Damage to:

Kidney

Further data:

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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## **SECTION 12. Ecological information**

### **Ecotoxicity**

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No information available.

## **Persistence and degradability**

No information available.

## **Bioaccumulative potential**

No information available.

## **Mobility in soil**

No information available.

### *Additional ecological information*

Discharge into the environment must be avoided.

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## **SECTION 13. Disposal considerations**

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

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## **SECTION 14. Transport information**

### **Land transport (DOT)**

Not classified as dangerous in the meaning of transport regulations.

### **Air transport (IATA)**

Not classified as dangerous in the meaning of transport regulations.

### **Sea transport (IMDG)**

Not classified as dangerous in the meaning of transport regulations.

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## **SECTION 15. Regulatory information**

### **United States of America**

#### **OSHA Hazards**

Combustible dust

Skin irritant

Eye irritant

This information is based on 29 CFR 1910.1200 criteria prior to adoption of the GHS, and may deviate from the GHS information on the label and in section 2.

#### **SARA 311/312 Hazards**

Acute Health Hazard

#### **SARA 313**

SARA 313: 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 302**

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

#### DEA List I

Not listed

#### DEA List II

Not listed

### US State Regulations

#### Massachusetts Right To Know

Remarks

No components are subject to the Massachusetts Right to Know Act.

#### Pennsylvania Right To Know

*Ingredients*

trans-cyclohexane-1,2-dinitrilotetraacetic acid monohydrate

#### New Jersey Right To Know

*Ingredients*

trans-cyclohexane-1,2-dinitrilotetraacetic acid monohydrate

#### California Prop 65 Components

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

#### Notification status

TSCA:

All components of the product are listed in the TSCA-inventory.

DSL:

All components of this product are on the Canadian DSL.

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### SECTION 16. Other information

#### Training advice

Provide adequate information, instruction and training for operators.

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

H315

Causes skin irritation.

H319

Causes serious eye irritation.

#### Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

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