

## SAFETY DATA SHEET

Version 4.4  
Revision Date 07/02/2014  
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1. PRODUCT AND COMPANY IDENTIFICATION

## 1.1 Product identifiers

Product name : *tert*-Dodecylmercaptan

Product Number : 471585

Brand : Aldrich

CAS-No. : 25103-58-6

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

Identified uses : Laboratory chemicals, Manufacture of substances

## 1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA

Telephone : +1 800-325-5832

Fax : +1 800-325-5052

## 1.4 Emergency telephone number

Emergency Phone # : +1-703-527-3887 (CHEMTREC)

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2. HAZARDS IDENTIFICATION

## 2.1 Classification of the substance or mixture

**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Skin irritation (Category 2), H315

Eye irritation (Category 2A), H319

Acute aquatic toxicity (Category 1), H400

Chronic aquatic toxicity (Category 1), H410

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

## 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word : Warning

Hazard statement(s)

H315

Causes skin irritation.

H319

Causes serious eye irritation.

H410

Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P264

Wash skin thoroughly after handling.

P273

Avoid release to the environment.

P280

Wear protective gloves/ eye protection/ face protection.

P302 + P352

IF ON SKIN: Wash with plenty of soap and 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.

P321

Specific treatment (see supplemental first aid instructions on this label).

|             |                                                                     |
|-------------|---------------------------------------------------------------------|
| P332 + P313 | If skin irritation occurs: Get medical advice/ attention.           |
| P337 + P313 | If eye irritation persists: Get medical advice/ attention.          |
| P362        | Take off contaminated clothing and wash before reuse.               |
| P391        | Collect spillage.                                                   |
| P501        | Dispose of contents/ container to an approved waste disposal plant. |

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Stench.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Synonyms : tert-Dodecanethiol

Formula : C<sub>12</sub>H<sub>26</sub>S

Molecular Weight : 202.40 g/mol

CAS-No. : 25103-58-6

EC-No. : 246-619-1

#### Hazardous components

| Component                 | Classification                                                                           | Concentration |
|---------------------------|------------------------------------------------------------------------------------------|---------------|
| <b>tert-Dodecanethiol</b> |                                                                                          |               |
|                           | Skin Irrit. 2; Eye Irrit. 2A;<br>Aquatic Acute 1; Aquatic<br>Chronic 1; H315, H319, H410 | -             |

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

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 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

## 5. FIREFIGHTING MEASURES

### 5.1 Extinguishing media

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

Carbon oxides, Sulphur oxides

### 5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

### 5.4 Further information

no data available

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## 6. ACCIDENTAL RELEASE MEASURES

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

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

For personal protection see section 8.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For disposal see section 13.

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## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Normal measures for preventive fire protection.

For precautions see section 2.2.

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

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

### 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

Safety glasses with side-shields conforming to EN166 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.

##### Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.2 mm

Break through time: > 480 min

Material tested: Dermatrill® P (KCL 743 / Aldrich Z677388, Size M)

##### Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 361 min

Material tested: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Body Protection**

impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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## **9. PHYSICAL AND CHEMICAL PROPERTIES**

### **9.1 Information on basic physical and chemical properties**

- |                                                 |                                                                               |
|-------------------------------------------------|-------------------------------------------------------------------------------|
| a) Appearance                                   | Form: clear, liquid<br>Colour: light brown                                    |
| b) Odour                                        | Stench.                                                                       |
| c) Odour Threshold                              | no data available                                                             |
| d) pH                                           | no data available                                                             |
| e) Melting point/freezing point                 | Melting point/range: < -30 °C (< -22 °F)                                      |
| f) Initial boiling point and boiling range      | 227 - 248 °C (441 - 478 °F) - lit.                                            |
| g) Flash point                                  | 97 °C (207 °F) - closed cup                                                   |
| h) Evaporation rate                             | no data available                                                             |
| i) Flammability (solid, gas)                    | no data available                                                             |
| j) Upper/lower flammability or explosive limits | no data available                                                             |
| k) Vapour pressure                              | 0.8 hPa (0.6 mmHg) at 50 °C (122 °F)<br>0.03 hPa (0.02 mmHg) at 20 °C (68 °F) |
| l) Vapour density                               | 6.99 - (Air = 1.0)                                                            |
| m) Relative density                             | 0.86 g/cm <sup>3</sup> at 20 °C (68 °F)                                       |
| n) Water solubility                             | insoluble                                                                     |
| o) Partition coefficient: n-octanol/water       | log Pow: 6.1                                                                  |
| p) Auto-ignition temperature                    | no data available                                                             |
| q) Decomposition temperature                    | 350 °C (662 °F) -                                                             |
| r) Viscosity                                    | no data available                                                             |
| s) Explosive properties                         | no data available                                                             |
| t) Oxidizing properties                         | no data available                                                             |

## 9.2 Other safety information

Relative vapour density 6.99 - (Air = 1.0)

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## 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

no data available

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

Strong oxidizing agents

### 10.6 Hazardous decomposition products

Other decomposition products - no data available  
In the event of fire: see section 5

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## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - rat - 4,400 - 12,000 mg/kg

Inhalation: no data available

LD50 Dermal - rabbit - 12,600 mg/kg

no data available

#### Skin corrosion/irritation

Skin - rabbit

Result: Skin irritation - 24 h

#### Serious eye damage/eye irritation

Eyes - rabbit

Result: Moderate eye irritation

#### Respiratory or skin sensitisation

no data available

#### Germ cell mutagenicity

no data available

#### 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.

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

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

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

#### Reproductive toxicity

no data available

no data available

**Specific target organ toxicity - single exposure**

no data available

**Specific target organ toxicity - repeated exposure**

no data available

**Aspiration hazard**

no data available

**Additional Information**

RTECS: JR3150000

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

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**12. ECOLOGICAL INFORMATION****12.1 Toxicity**

Toxicity to fish LC50 - Salmo salar (Atlantic salmon) - 0.9 mg/l

Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia - 0.5 mg/l - 48 h

Toxicity to algae EC50 - Desmodesmus subspicatus (green algae) - 81 - 100 mg/l - 72 h

**12.2 Persistence and degradability**

Biodegradability Result: 10.40 % - Not readily biodegradable.

**12.3 Bioaccumulative potential**

no data available

**12.4 Mobility in soil**

no data available

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Other adverse effects**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Very toxic to aquatic life.

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**13. DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods****Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**

Dispose of as unused product.

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**14. TRANSPORT INFORMATION****DOT (US)**

Not dangerous goods

**IMDG**

UN number: 3082

Class: 9

Packing group: III

EMS-No: F-A, S-F

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (tert-Dodecanethiol)

Marine pollutant: Marine pollutant

**IATA**

UN number: 3334

Class: 9

Packing group: III

Proper shipping name: Aviation regulated liquid, n.o.s. (tert-Dodecanethiol)

**Further information**

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

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**15. REGULATORY INFORMATION****SARA 302 Components**

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

**SARA 313 Components**

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 311/312 Hazards**

Acute Health Hazard

**Massachusetts Right To Know Components**

|                    | CAS-No.    | Revision Date |
|--------------------|------------|---------------|
| tert-Dodecanethiol | 25103-58-6 | 1993-04-24    |

**Pennsylvania Right To Know Components**

|                    | CAS-No.    | Revision Date |
|--------------------|------------|---------------|
| tert-Dodecanethiol | 25103-58-6 | 1993-04-24    |

**New Jersey Right To Know Components**

|                    | CAS-No.    | Revision Date |
|--------------------|------------|---------------|
| tert-Dodecanethiol | 25103-58-6 | 1993-04-24    |

**California Prop. 65 Components**

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

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**16. OTHER INFORMATION****Full text of H-Statements referred to under sections 2 and 3.**

|                 |                                                       |
|-----------------|-------------------------------------------------------|
| Aquatic Acute   | Acute aquatic toxicity                                |
| Aquatic Chronic | Chronic aquatic toxicity                              |
| Eye Irrit.      | Eye irritation                                        |
| H315            | Causes skin irritation.                               |
| H319            | Causes serious eye irritation.                        |
| H400            | Very toxic to aquatic life.                           |
| H410            | Very toxic to aquatic life with long lasting effects. |

**HMIS Rating**

|                        |   |
|------------------------|---|
| Health hazard:         | 2 |
| Chronic Health Hazard: |   |
| Flammability:          | 1 |
| Physical Hazard        | 0 |

**NFPA Rating**

|                    |   |
|--------------------|---|
| Health hazard:     | 2 |
| Fire Hazard:       | 1 |
| Reactivity Hazard: | 0 |

**Further information**

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**Preparation Information**

Sigma-Aldrich Corporation  
Product Safety – Americas Region  
1-800-521-8956

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