

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 7.5

Revision Date 11.03.2025

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GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

Product name : Dichloromethane-d<sub>2</sub>

Product Number : 530506

Brand : Aldrich

REACH No. : A registration number is not available for this substance as the substance or its uses are exempted from registration or the annual tonnage does not require a registration.

CAS-No. : 1665-00-5

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

Identified uses : Laboratory chemicals, Manufacture of substances

### 1.3

CHEMIKART

### 1.4 Emergency telephone

Emergency Phone # : 000 800 1007 141 (CHEMTREC)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

|                                                                                        |                                          |
|----------------------------------------------------------------------------------------|------------------------------------------|
| Skin irritation, (Category 2)                                                          | H315: Causes skin irritation.            |
| Eye irritation, (Category 2)                                                           | H319: Causes serious eye irritation.     |
| Carcinogenicity, (Category 2)                                                          | H351: Suspected of causing cancer.       |
| Specific target organ toxicity - single exposure, (Category 3), Central nervous system | H336: May cause drowsiness or dizziness. |

## 2.2 Label elements

### Labelling according Regulation (EC) No 1272/2008

#### Pictogram

|                                |                                                                                                                                  |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Signal Word                    | Warning                                                                                                                          |
| Hazard Statements              |                                                                                                                                  |
| H315                           | Causes skin irritation.                                                                                                          |
| H319                           | Causes serious eye irritation.                                                                                                   |
| H336                           | May cause drowsiness or dizziness.                                                                                               |
| H351                           | Suspected of causing cancer.                                                                                                     |
| Precautionary Statements       |                                                                                                                                  |
| P202                           | Do not handle until all safety precautions have been read and understood.                                                        |
| P261                           | Avoid breathing mist or vapors.                                                                                                  |
| P264                           | Wash skin thoroughly after handling.                                                                                             |
| P302 + P352                    | IF ON SKIN: Wash with plenty of 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. |
| P308 + P313                    | IF exposed or concerned: Get medical advice/ attention.                                                                          |
| Supplemental Hazard Statements | none                                                                                                                             |

### Reduced Labeling (<= 125 ml)

#### Pictogram

|                                |                                                                           |
|--------------------------------|---------------------------------------------------------------------------|
| Signal Word                    | Warning                                                                   |
| Hazard Statements              |                                                                           |
| H351                           | Suspected of causing cancer.                                              |
| Precautionary Statements       |                                                                           |
| P202                           | Do not handle until all safety precautions have been read and understood. |
| P308 + P313                    | IF exposed or concerned: Get medical advice/ attention.                   |
| 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.

#### Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

#### Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Synonyms : Methylene chloride-d2  
Dideuteromethylenechloride

Formula :  $\text{CD}_2\text{Cl}_2$   
Molecular weight : 86,95 g/mol  
CAS-No. : 1665-00-5  
EC-No. : 216-776-0

| Component                   |           | Classification                                                                | Concentration |
|-----------------------------|-----------|-------------------------------------------------------------------------------|---------------|
| <b>dichloro(2H2)methane</b> |           |                                                                               |               |
| CAS-No.                     | 1665-00-5 | Skin Irrit. 2; Eye Irrit. 2;<br>Carc. 2; STOT SE 3; H315,<br>H319, H351, H336 | <= 100 %      |
| EC-No.                      | 216-776-0 |                                                                               |               |

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

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## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

Show this material safety data sheet to the doctor in attendance.

#### If inhaled

After inhalation: fresh air. Call in physician.

#### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

#### In case of eye contact

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

#### If swallowed

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

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## 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**

Carbon oxides

Hydrogen chloride gas

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.

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**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Do not breathe vapors, aerosols. 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.

**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 with liquid-absorbent material (e.g. Chemisorb® ). Dispose of properly. Clean up affected area.

**6.4 Reference to other sections**

For disposal see section 13.

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**SECTION 7: Handling and storage****7.1 Precautions for safe handling****Advice on safe handling**

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

**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**

Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

**Storage class**

Storage class (TRGS 510): 6.1C: Combustible, acute toxic Cat.3 / toxic compounds or compounds which causing chronic effects

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

### 8.1 Control parameters

#### Ingredients with workplace control parameters

### 8.2 Exposure controls

#### Personal protective equipment

##### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

##### Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Splash contact

Material: Viton®

Minimum layer thickness: 0,7 mm

Break through time: 120 min

Material tested: Vitoject® (KCL 890 / Aldrich Z677698, Size M)

##### Body Protection

protective clothing

##### Respiratory protection

Recommended Filter type: Filter AX (EN 371)

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.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- |                                            |                              |
|--------------------------------------------|------------------------------|
| a) Physical state                          | liquid                       |
| b) Color                                   | No data available            |
| c) Odor                                    | No data available            |
| d) Melting point/freezing point            | Melting point/ range: -97 °C |
| e) Initial boiling point and boiling range | 40 °C - lit.                 |
| f) Flammability (solid, gas)               | No data available            |

|                                                 |                                                                                  |
|-------------------------------------------------|----------------------------------------------------------------------------------|
| g) Upper/lower flammability or explosive limits | Upper explosion limit: 22 %(V)<br>Lower explosion limit: 14 %(V)                 |
| h) Flash point                                  | No data available                                                                |
| i) Autoignition temperature                     | 556,1 °C                                                                         |
| j) Decomposition temperature                    | No data available                                                                |
| k) pH                                           | No data available                                                                |
| l) Viscosity                                    | Viscosity, kinematic: No data available<br>Viscosity, dynamic: No data available |
| m) Water solubility                             | slightly soluble                                                                 |
| n) Partition coefficient: n-octanol/water       | No data available                                                                |
| o) Vapor pressure                               | 1.687,3 hPa at 55 °C<br>470,8 hPa at 20 °C                                       |
| p) Density                                      | 1,362 g/mL at 25 °C - lit.                                                       |
| Relative density                                | No data available                                                                |
| q) Relative vapor density                       | No data available                                                                |
| r) Particle characteristics                     | No data available                                                                |
| s) Explosive properties                         | No data available                                                                |
| t) Oxidizing properties                         | none                                                                             |

## 9.2 Other safety information

|                        |                 |
|------------------------|-----------------|
| Relative vapor density | 3 - (Air = 1.0) |
|------------------------|-----------------|

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### 10.3 Possibility of hazardous reactions

Risk of explosion with:

Alkali metals  
powdered aluminium  
nitrogen oxides  
nitrogen dioxide  
Potassium  
sodium azide  
perchloric acid  
Nitric acid  
aluminium chloride

Amines  
Oxygen  
(as liquefied gas)  
sodium  
aromatic hydrocarbons  
with  
powdered aluminium  
Exothermic reaction with:  
Alkaline earth metals  
Powdered metals  
amides  
alcoholates  
nonmetallic oxides  
potassium tert-butanolate  
sodium amide  
Lithium

#### **10.4 Conditions to avoid**

Heat.  
no information available

#### **10.5 Incompatible materials**

No data available

#### **10.6 Hazardous decomposition products**

In the event of fire: see section 5

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### **SECTION 11: Toxicological information**

#### **11.1 Information on toxicological effects**

##### **Acute toxicity**

LD50 Oral - Rat - male and female - > 2.000 mg/kg  
(OECD Test Guideline 401)

Remarks: The value is given in analogy to the following substances: Dichloromethane  
LC50 Inhalation - Mouse - 4 h - 86 mg/l - vapor

Remarks: (ECHA)

The value is given in analogy to the following substances: Dichloromethane

Symptoms: Possible damages:, mucosal irritations

LD50 Dermal - Rat - male and female - > 2.000 mg/kg  
(OECD Test Guideline 402)

Remarks: The value is given in analogy to the following substances: Dichloromethane

##### **Skin corrosion/irritation**

Skin - Rabbit

Result: Irritations - 4 h  
(OECD Test Guideline 404)

Remarks: The value is given in analogy to the following substances: Dichloromethane

Remarks: Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.

##### **Serious eye damage/eye irritation**

Eyes - Rabbit

Result: Eye irritation

Remarks: (ECHA)

The value is given in analogy to the following substances: Dichloromethane  
Remarks: Risk of corneal clouding.

#### **Respiratory or skin sensitization**

Local lymph node assay (LLNA) - Mouse

Result: negative

(OECD Test Guideline 429)

Remarks: The value is given in analogy to the following substances: Dichloromethane

#### **Germ cell mutagenicity**

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 473

Result: positive

Remarks: The value is given in analogy to the following substances: Dichloromethane

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: positive

Remarks: The value is given in analogy to the following substances: Dichloromethane

Test Type: In vivo micronucleus test

Species: Mouse

Cell type: Bone marrow

Application Route: Gavage

Method: OECD Test Guideline 474

Result: negative

Remarks: The value is given in analogy to the following substances: Dichloromethane

#### **Carcinogenicity**

Suspected of causing cancer.

#### **Reproductive toxicity**

No data available

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

Inhalation - May cause drowsiness or dizziness. - Central nervous system

Remarks: The value is given in analogy to the following substances: Dichloromethane

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

No data available

#### **Aspiration hazard**

No data available

### **11.2 Additional Information**

#### **Endocrine disrupting properties**

##### **Product:**

Assessment

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Repeated dose toxicity - Rat - male and female - Oral - 104 Weeks - NOAEL (No observed adverse effect level) - 6 mg/kg

Remarks: The value is given in analogy to the following substances: Dichloromethane



Repeated dose toxicity - Rat - male and female - Inhalation - 104 Weeks

Remarks: The value is given in analogy to the following substances: Dichloromethane

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

Dizziness, Nausea, Vomiting, narcosis, Cough, irritant effects, Unconsciousness, Shortness of breath, respiratory paralysis, somnolence, depressed respiration, CNS disorders, inebriation

Risk of corneal clouding.

The following applies to aliphatic halogenated hydrocarbons in general: systemic effect: narcosis, cardiovascular disorders. Toxic effect on liver, kidneys.

Dichloromethane is metabolized in the body producing carbon monoxide which increases and sustains carboxyhemoglobin levels in the blood, reducing the oxygen-carrying capacity of the blood.

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

Systemic effects:

After absorption of large quantities:

CNS disorders

Drowsiness

Dizziness

drop in blood pressure

Cardiac irregularities

depressed respiration

inebriation

Unconsciousness

narcosis

Swallowing may result in damage to the following:

Liver

Kidney

The following applies to aliphatic halogenated hydrocarbons in general: systemic effect: narcosis, cardiovascular disorders. Toxic effect on liver, kidneys.

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

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## SECTION 12: Ecological information

### 12.1 Toxicity

|                  |                                                                                                                                                                                        |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Toxicity to fish | flow-through test LC50 - Pimephales promelas (fathead minnow) - 193,00 mg/l - 96 h<br>Remarks: (ECHA)<br>The value is given in analogy to the following substances:<br>Dichloromethane |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                     |                                                                                                                                                                                 |
|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Toxicity to daphnia and other aquatic invertebrates | static test LC50 - Daphnia magna (Water flea) - 27 mg/l - 48 h (US-EPA)<br>Remarks: The value is given in analogy to the following substances: Dichloromethane                  |
| Toxicity to bacteria                                | static test EC50 - activated sludge - 2.590 mg/l - 40 min (OECD Test Guideline 209)<br>Remarks: The value is given in analogy to the following substances: Dichloromethane      |
| Toxicity to fish(Chronic toxicity)                  | flow-through test LC50 - Pimephales promelas (fathead minnow) - 471 mg/l - 8 d<br>Remarks: (ECHA)<br>The value is given in analogy to the following substances: Dichloromethane |

## 12.2 Persistence and degradability

|                  |                                                                                                                                                                                            |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Biodegradability | aerobic - Exposure time 28 d<br>Result: 68 % - Readily biodegradable.<br>(OECD Test Guideline 301D)<br>Remarks: The value is given in analogy to the following substances: Dichloromethane |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 12.3 Bioaccumulative potential

|                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bioaccumulation | Cyprinus carpio (Carp) - 6 Weeks<br>- 250 µg/l(dichloro(2H2)methane)<br><br>Bioconcentration factor (BCF): 2 - 5,4<br>(OECD Test Guideline 305)<br><br>Remarks: The value is given in analogy to the following substances: Dichloromethane<br><br>Cyprinus carpio (Carp) - 6 Weeks<br>- 25 µg/l(dichloro(2H2)methane)<br><br>Bioconcentration factor (BCF): 6 - 40<br>(OECD Test Guideline 305)<br><br>Remarks: The value is given in analogy to the following substances: Dichloromethane |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 12.4 Mobility in soil

No data available

## 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 Endocrine disrupting properties

### Product:

Assessment : The substance/mixture does not contain components

considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## 12.7 Other adverse effects

No data available

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

No data available

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## SECTION 14: Transport information

### 14.1 UN number

ADR/RID: 1593

IMDG: 1593

IATA: 1593

### 14.2 UN proper shipping name

ADR/RID: DICHLOROMETHANE

IMDG: DICHLOROMETHANE

IATA: Dichloromethane

### 14.3 Transport hazard class(es)

ADR/RID: 6.1

IMDG: 6.1

IATA: 6.1

### 14.4 Packaging group

ADR/RID: III

IMDG: III

IATA: III

### 14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

### 14.6 Special precautions for user

Tunnel restriction code : (E)

Further information : No data available

### 14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

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## SECTION 15: Regulatory information

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

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

#### Authorisations and/or restrictions on use

Regulation (EU) No 2024/590 on substances that : dichloro(2H2)methane deplete the ozone layer

REACH - Restrictions on the manufacture,  
placing on the market and use of certain  
dangerous substances, mixtures and articles  
(Annex XVII)

: dichloro(2H2)methane

### **Other regulations**

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

### **15.2 Chemical Safety Assessment**

For this product a chemical safety assessment was not carried out

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## **SECTION 16: Other information**

### **Full text of H-Statements**

|      |                                    |
|------|------------------------------------|
| H315 | Causes skin irritation.            |
| H319 | Causes serious eye irritation.     |
| H336 | May cause drowsiness or dizziness. |
| H351 | Suspected of causing cancer.       |

CHEMIKART

## Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

## Further information

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.sigma-aldrich.com](http://www.sigma-aldrich.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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Details in analogy to the undeuterated compound.

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