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#### SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

Version 6.8 Revision Date 06.08.2024 Print Date 04.11.2024 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	:	1-Dodecanethiol
	Product Number Brand REACH No.	-	471364 Aldrich 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.	:	112-55-0
1.2	Relevant identified us	es	of the substance or mixture and uses advised against
	Identified uses	:	Laboratory chemicals, Manufacture of substances
13	Details of the supplier	· of	the safety data sheet

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

Company	: Sigma-Aldrich Chemie GmbH Eschenstrasse 5 D-82024 TAUFKIRCHEN
Telephone	: +49 (0)89 6513-1130
Fax	: +49 (0)89 6513-1161
E-mail address	: technischerservice@merckgroup.com

#### 1.4 Emergency telephone

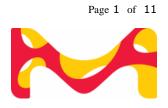
Emergency Phone #	<ul> <li>: 0800 181 7059 (CHEMTREC Deutschland) +49 (0)696 43508409 (CHEMTREC weltweit)</li> </ul>
	weltweit)

#### **SECTION 2: Hazards identification**

# 2.1 Classification of the substance or mixture Skin corrosion, (Sub-category 1C) Serious eye damage, (Category 1) Skin sensitization, (Sub-category 1A) Short-term (acute) aquatic H314: Causes series severe skin burns and eye damage. H318: Causes serious eye damage. H318: Causes serious eye damage. H317: May cause an allergic skin reaction. H400: Very toxic to aquatic life.

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hazard, (Category 1)

Long-term (chronic) aquatic hazard, (Category 1) H410: Very toxic to aquatic life with long lasting effects.

#### 2.2 Label elements

# Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal Word	Danger
Hazard Statements H314 H317 H410	Causes severe skin burns and eye damage. May cause an allergic skin reaction. Very toxic to aquatic life with long lasting effects.
Precautionary Statements	
P261	Avoid breathing mist or vapors.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with 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.
Supplemental Hazard Statements	none

#### Reduced Labeling (<= 125 ml)

Pictogram	
Signal Word	Danger
Hazard Statements H317 H314	May cause an allergic skin reaction. Causes severe skin burns and eye damage.
Precautionary Statements P261 P272	Avoid breathing mist or vapors. Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with 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.
Supplemental Hazard Statements	none

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#### 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. Stench.

#### **SECTION 3: Composition/information on ingredients**

Substances			
Synonyms	: Dodecyl mercaptar Mercaptan C12 Lauryl mercaptan NDM n-Dodecyl mercap		
Formula	: C <sub>12</sub> H <sub>26</sub> S		
Molecular weight	: 202,4 g/mol		
CAS-No.	: 112-55-0		
EC-No.	: 203-984-1		
Component		Classification	Concentration
Dodecane-1-thiol			
CAS-No.	112-55-0	Skin Corr. 1C; Eye Dam.	<= 100 %
EC-No.	203-984-1	1; Skin Sens. 1A; Aquatic	
		Acute 1; Aquatic Chronic	
		1; H314, H318, H317,	
		H400, H410	
		M-Factor - Aquatic Acute:	
		•	
		10 - Aquatic Chronic: 10	

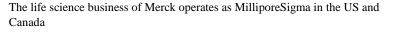
For the full text of the H-Statements mentioned in this Section, see Section 16.

#### **SECTION 4: First aid measures**

- **4.1 Description of first-aid measures** No data available
- **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** Carbon dioxide (CO2) Foam Dry powder

**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 Sulfur oxides

Combustible.

- 5.3 Advice for firefighters No data available
- 5.4 Further information No data available

#### **SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures** For personal protection see section 8.
- 6.2 Environmental precautions No data available
- 6.3 Methods and materials for containment and cleaning up No data available
- **6.4** Reference to other sections For disposal see section 13.

#### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** For precautions see section 2.2.
- 7.2 Conditions for safe storage, including any incompatibilities No data available

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#### 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

#### 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). Full contact Material: butyl-rubber Minimum layer thickness: 0,7 mm Break through time: 480 min Material tested:Butoject® (KCL 898)

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). Splash contact Material: Nitrile rubber Minimum layer thickness: 0,4 mm Break through time: 30 min

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

Prevent product from entering drains.

#### 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	characteristic
d)	Melting point/freezing point	Melting point/ range: -97 °C at 1.013 hPa
e)	Initial boiling point and boiling range	266 - 283 °C - lit.
f)	Flammability (solid, gas)	No data available
g)	Upper/lower flammability or explosive limits	No data available

Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

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	h)	Flash point	128 °C - closed cup - Regulation (EC) No. 440/2008, Annex, A.9	
	i)	Autoignition temperature	No data available	
	j)	Decomposition temperature	350 °C	
	k)	рН	No data available	
	I)	Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: 3,24 mPa.s at 20 °C	
	m)	Water solubility	0,00001 g/l at 20 °C - OECD Test Guideline 105- partly soluble	
	n)	Partition coefficient: n-octanol/water	log Pow: > 6,5 at 25 °C - Potential bioaccumulation	
	o)	Vapor pressure	< 1 hPa at 25 °C	
	p)	Density	0,845 g/cm3 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	Otł	ner safety informatio	'n	
		Relative vapor density	7,0	
SECT	ION	10: Stability and re	activity	
		activity		
	No data available			
10.2	0.2 Chemical stability No data available			
10.3	<b>LO.3 Possibility of hazardous reactions</b> Violent reactions possible with: Strong oxidizing agents strong reducing agents Alkali metals Strong bases			
10.4		<b>nditions to avoid</b> data available		
10.5		c <b>ompatible materials</b> data available		
10.6		zardous decompositi the event of fire: see se		

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

#### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - >= 5.000 mg/kg (OECD Test Guideline 401) LC50 Inhalation - Rat - 4,5 h - > 3,1 mg/l - vapor

(OECD Test Guideline 403) LD50 Dermal - Rat - male - >= 2.000 mg/kg (OECD Test Guideline 402)

#### Skin corrosion/irritation

Skin - Rabbit Result: Corrosive (OECD Test Guideline 404)

Serious eye damage/eye irritation No data available

#### Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse Result: positive (OECD Test Guideline 429)

#### Germ cell mutagenicity

Test Type: Ames test Test system: S. typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative Test Type: sister chromatid exchange assay Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 479 Result: negative Test Type: Mutagenicity (mammal cell test): Test system: Mouse lymphoma test Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative

Test Type: Micronucleus test Species: Mouse Cell type: Bone marrow Application Route: Oral Method: OECD Test Guideline 474 Result: negative

#### Carcinogenicity

No data available

# Reproductive toxicity

No data available

#### Specific target organ toxicity - single exposure No data available

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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.

#### RTECS: JR3155000

Nausea, Headache, Vomiting

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

After uptake:

Headache

The following applies to mercaptans in general: offensive odour.

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

#### SECTION 12: Ecological information

#### **12.1 Toxicity**

static test EC50 - Daphnia magna (Water flea) - 1 - 10 mg/l - 48 h (OECD Test Guideline 202)
static test EbC50 - Raphidocelis subcapitata (freshwater green alga) - < 0,0145 mg/l - 72 h (OECD Test Guideline 201)

#### 12.2 Persistence and degradability

Biodegradability	aerobic - Exposure time 28 d
	Result: 0 % - Not readily biodegradable.
	(OECD Test Guideline 301D)
	Remarks: The value is given in analogy to the following substances: tert-Dodecanethiol

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# 12.3 Bioaccumulative potential

No data available

# 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 <u>Product:</u>

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

Discharge into the environment must be avoided.

## SECTION 13: Disposal considerations

# 13.1 Waste treatment methods

No data available

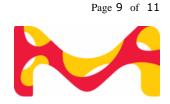
#### **SECTION 14: Transport information** 14.1 UN number ADR/RID: 1760 IMDG: 1760 IATA: 1760 14.2 UN proper shipping name ADR/RID: CORROSIVE LIQUID, N.O.S. (Dodecane-1-thiol) (Dodecane-1-thiol) CORROSIVE LIQUID, N.O.S. (Dodecane-1-thiol) (Dodecane-1-thiol) IMDG: IATA: Corrosive liquid, n.o.s. (Dodecane-1-thiol) (Dodecane-1-thiol) 14.3 Transport hazard class(es) ADR/RID: 8 IMDG: 8 IATA: 8 14.4 Packaging group ADR/RID: III IMDG: III IATA: III 14.5 Environmental hazards ADR/RID: yes IMDG Marine pollutant: yes IATA: no 14.6 Special precautions for user

-	•			
Tunnel	restriction	code	:	(E)

Further information : No data available

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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.

#### National legislation

Seveso III: Directive 2012/18/EU of the E1 European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. ENVIRONMENTAL HAZARDS

#### **15.2 Chemical Safety Assessment**

For this product a chemical safety assessment was not carried out

#### **SECTION 16: Other information**

#### Full text of H-Statements

H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

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#### 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

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