

SAFETY DATA SHEET

Version: v1

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

1.1 Product identifiers

Product name : 1-Dodecanethiol (NDM)
Product Number : D105610
Brand : aladdin
CAS-No. : 112-55-0

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

Identified uses : Laboratory chemicals, Manufacture of substances.

1.3 Company

Company : ALADDIN SCIENTIFIC CORPORATION
Address : 14078 Meridian Parkway,
Riverside, CA. 92518
Telephone : +1 (833) 552-7181
Fax : no data available

1.4 Emergency telephone number

CHEMTREC®, Inside the USA : 1-800-424-9300
CHEMTREC®, Outside the USA :

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Skin corrosion (Sub-category 1C), H314

Serious eye damage (Category 1), H318

Skin sensitization (Sub-category 1B), H317

Short-term (acute) aquatic hazard (Category 1), H400

Long-term (chronic) aquatic hazard (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



Danger

Signal word

Hazard statement(s)

H302	Harmful if swallowed
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H332	Harmful if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

Precautionary statement(s)

P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash hands [and ...] thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
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.
P284	[In case of inadequate ventilation] Wear respiratory protection.
P321	Specific treatment (see ... on this label).
P330	Rinse mouth.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+P352	IF ON SKIN: wash with plenty of water.
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.
P333+P313	IF SKIN irritation or rash occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container to an approved waste disposal plant.
P264+P265	Wash hands [and ...] thoroughly after handling. Do not touch eyes.

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P301+P317	IF SWALLOWED: Get medical help.
P305+P354+P338	IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P317	Get emergency medical help.
P337+P317	If eye irritation persists: Get medical help.
P332+P317	If skin irritation occurs: Get medical help.
P302+P361+P354	IF ON SKIN: Take off Immediately all contaminated clothing. Immediately rinse with water for several minutes.
P316	Get emergency medical help immediately.
P319	Get medical help if you feel unwell.
P342+P316	If experiencing respiratory symptoms: Get emergency medical help immediately.

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

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms	: Dodecyl mercaptan ;Mercaptan C12 ;Lauryl mercaptan ;NDM ;n-Dodecyl mercaptan
Formula	: C ₁₂ H ₂₆ S
Molecular weight	: 202.39
CAS No.	: 112-55-0
EC-NO.	: 203-984-1

Component	Classification	Concentration
1-Dodecanethiol (NDM)	Skin Corr. 1C; Eye Dam. 1; Skin Sens. 1B; Aquatic Acute 1; Aquatic Chronic 1; H314, H318, H317, H400, H410 M-Factor - Aquatic Acute: 1	≥98%

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

First aiders need to protect themselves. 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. Call a physician immediately.

In case of eye contact

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

If swallowed

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

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

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing media**

Carbon dioxide (CO2) Foam Dry powder

Unsuitable extinguishing media

no data available

5.2 Special hazards arising from the substance or mixture

Carbon oxides Sulfur oxides Combustible. Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.

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.

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). Dispose of properly. Clean up affected area.

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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

Tightly closed.Storage temperature room temp , Air sensitive , Argon filled storage.

7.3 Specific end use(s)

no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Hazard composition and occupational exposure limits

Component	CAS No.	Value	Control parameters	Basis
1-Dodecanethiol	112-55-0	TWA	0.1 ppm	U.S.A. ACGIH threshold limit value (TLV)
	Note	Skin sensitivity		
		C	0.5 ppm4.1 mg/m3	U.S.A. NIOSH recommended exposure limits

8.2 Exposure controls

Appropriate engineering controls

Replace contaminated clothing immediately Use skin protective lotion. Wash hands and face after using this substance

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). Tightly fitting safety goggles

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.

Body Protection

protective clothing

Respiratory protection

required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type ABEK

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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance	form: liquid color: Colorless
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	-7°C
f) Initial boiling point and boiling range	266-283°C
g) Flash point	87°C
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	no data available
l) Vapour density	no data available
m) Relative density	0.845-0.847
n) Water solubility	Insoluble in water, soluble in methanol, ether, acetone, benzene and ethyl acetate.
o) Partition coefficient: n-octanol/water	no data available
p) Auto-ignition temperature	no data available
q) Decomposition temperature	no data available
r) Viscosity	no data available
s) Explosive properties N	no data available
t) Oxidizing properties N	no data available

9.2 Other safety information

no data available

SECTION 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

Violent reactions possible with: Strong oxidizing agents strong reducing agents Alkali metals Strong bases

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

no data available

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - > 5.000 mg/kg

(OECD Test Guideline 401)

Remarks: (ECHA)

LC50 Inhalation - Rat - 4,5 h - > 3,1 mg/l

(OECD Test Guideline 403)

LD50 Dermal - Rat - male - > 2.000 mg/kg

(OECD Test Guideline 402)

Remarks: (ECHA)

Skin corrosion/irritation

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

Serious eye damage/eye irritation

no data available

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Respiratory or skin sensitisation

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

Germ cell mutagenicity

Test Type: Ames test Test system: Salmonella 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

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Additional Information

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**

Toxicity to fish semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - > 100

mg/l - 96 h

Remarks: (ECHA)

semi-static test NOEC - *Oncorhynchus mykiss* (rainbow trout) - 100

mg/l - 96 h

Remarks: (ECHA)

Toxicity to daphnia

and other aquatic

invertebrates

static test EC50 - *Daphnia magna* (Water flea) - 1 - 10 mg/l - 48 h

(OECD Test Guideline 202)

Toxicity to algae static test EbC50 - *Pseudokirchneriella subcapitata* (green algae) -

0,25 mg/l - 72 h

(OECD Test Guideline 201)

static test EC10 - *Pseudokirchneriella subcapitata* (green algae) - <

0,0145 mg/l - 72 h

(OECD Test Guideline 201)

static test NOEC - *Pseudokirchneriella subcapitata* (green algae) - <

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

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

no data available

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12.6 Other adverse effects

no data available

SECTION 13:

13.1 Disposal considerations

Product

Dispose of the remaining and non recyclable solution to a licensed company.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

DOT (US)

UN number: 1760	Packing group: III	Class: 8
Proper shipping name: CORROSIVE LIQUID, N.O.S. (Dodecane-1-thiol)	Reportable Quantity(RQ): no data available	Poison Inhalation Hazard: no data available
Environmental Hazards: yes		

IMDG

UN number: 1760	Packing group: III	EMS-No: no data available
Proper shipping name: CORROSIVE LIQUID, N.O.S. (Dodecane-1-thiol)		

IATA

UN number: 1760	Packing group: III	Class: 8
Proper shipping name: CORROSIVE LIQUID, N.O.S. (Dodecane-1-thiol)		

SECTION 15: Regulatory information

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

SECTION 16: Other information

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