

SAFETY DATA SHEET

Version: v1
Revision Date: 2026-06-17
Print Date: 2026-06-17

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

1.1 Product identifiers

Product name : Dimethyl-d6 carbonate
Product Number : D302175
Brand : aladdin
CAS-No. : 108481-44-3

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

Identified uses : 仅供科研用途，不作为药物、家庭备用药或其它用途。

1.3 Company

Company :
Address :
Telephone :
Fax : no data available

1.4 Emergency telephone number

CHEMTREC®, Inside the USA :
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)
Flammable liquids : Category 2

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H225	Highly Flammable liquid and vapor
Precautionary statement(s)	
P210	Keep away from heat, hot surface, sparks, open flames and other ignition sources. - No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof [electrical/ventilating/lighting/.../] equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
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 [or shower].
P370+P378	In case of fire: Use ... to extinguish.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container to an approved waste disposal plant.

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

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms	: no data available
Formula	: C3D6O3
Molecular weight	: 96.11
CAS No.	: 108481-44-3
EC-NO.	: 690-550-3

Component	Classification	Concentration
Dimethyl-d6 carbonate	no data available	≥98%, ≥99 atom% D

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Show this safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air

In case of skin contact

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

In case of eye contact

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

If swallowed

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

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

Foam Carbon dioxide (CO₂) 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

Combustible. Pay attention to flashback. Vapours are heavier than air and may spread along floors. Development of hazardous combustion gases or vapours possible in the event of fire. Forms explosive mixtures with air at ambient temperatures.

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains. Risk of explosion.

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

no data available

7.2 Conditions for safe storage, including any incompatibilities

Storage temp. 2-8°C; Protect from light; Desiccated

7.3 Specific end use(s)

no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

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

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN166(EU).

Skin protection

Gloves must be checked before use. Please use proper methods to remove the gloves (do not touch the outer surface of the gloves), and avoid any skin parts contacting the product. After use, please handle the contaminated gloves carefully according to relevant laws and regulations and effective laboratory rules and procedures. Please clean and blow dry the protective gloves selected for your hands must meet the

specifications given in regulation (EU) 2016 / 425 and the en 374 standard derived from it.

Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective 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 fullface 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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance	no data available
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	2-4 °C
f) Initial boiling point and boiling range	90 °C
g) Flash point	16 °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	no data available
n) Water solubility	no data available
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

Vapours may form explosive mixture with air.

10.2 Chemical stability

Stable under recommended storage conditions

10.3 Possibility of hazardous reactions

May decompose on exposure to moist air or water. Violent reactions possible with: Reducing agents Oxidizing agents Acids Bases potassium tert-butanolate

10.4 Conditions to avoid

Warming

10.5 Incompatible materials

no data available

10.6 Hazardous decomposition products

no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male and female - > 5,000 mg/kg

(OECD Test Guideline 401)

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

LC50 Inhalation - Rat - male and female - 4 h - > 5.36 mg/l - vapour

(OECD Test Guideline 403)

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

LD50 Dermal - Rabbit - male and female - > 2,000 mg/kg

Remarks: (ECHA)

The value is given in analogy to the following substances: dimethyl carbonate

Skin corrosion/irritation

Skin - Rabbit Result: No skin irritation - 4 h (OECD Test Guideline 404) Remarks: The value is given in analogy to the following substances: dimethyl carbonate

Serious eye damage/eye irritation

Eyes - Rabbit Result: No eye irritation Remarks: (ECHA) The value is given in analogy to the following substances: dimethyl carbonate

Respiratory or skin sensitisation

Freund's complete adjuvant test - Guinea pig Result: negative (OECD Test Guideline 406) Remarks: The value is given in analogy to the following substances: dimethyl carbonate

Germ cell mutagenicity

Test Type: Chromosome aberration test in vitro Test system: lymphocyte Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: negative Remarks: The value is given in analogy to the following substances: dimethyl carbonate Test Type: Ames test Test system: Escherichia coli/Salmonella typhimurium Metabolic activation: with and without metabolic activation Result: negative Remarks: (ECHA) The value is given in analogy to the following substances: dimethyl carbonate Test Type: In vitro mammalian cell gene mutation test Test system: Chinese hamster lung cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative Remarks: The value is given in analogy to the following substances: dimethyl carbonate Test Type: Chromosome aberration test Species: Mouse Application Route: Oral Method: OECD Test Guideline 483 Result: negative Remarks: The value is given in analogy to the following substances: dimethyl carbonate

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

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

SECTION 12: Ecological information

12.1 Toxicity

Components:

Dimethyl-d6 carbonate:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): ≥ 100 mg/l

End point: mortality

Exposure time: 96 h

Test Type: flow-through test

Analytical monitoring: yes

Method: OECD Test Guideline 203

GLP: yes

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

The value is given in analogy to the following substances: dimethyl carbonate

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): > 100 mg/l

End point: Immobilization

Exposure time: 48 h

Test Type: static test

Analytical monitoring: yes

Method: OECD Test Guideline 202

GLP: yes

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

The value is given in analogy to the following substances: dimethyl carbonate

Toxicity to algae/aquatic plants: ErC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l

Exposure time: 72 h

Test Type: static test

Analytical monitoring: yes

Method: OECD Test Guideline 201

GLP: yes

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

The value is given in analogy to the following substances: dimethyl carbonate

NOEC (*Pseudokirchneriella subcapitata* (green algae)):

≥ 100 mg/l

End point: Growth inhibition

Exposure time: 72 h

Test Type: static test

Analytical monitoring: yes

Method: OECD Test Guideline 201

GLP: yes

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

The value is given in analogy to the following substances: dimethyl carbonate

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): NOEC (*Daphnia magna* (Water flea)): 25 mg/l

End point: Immobilization

Exposure time: 21 d

Test Type: semi-static test

Analytical monitoring: yes

Method: OECD Test Guideline 211

GLP: yes

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

The value is given in analogy to the following substances: dimethyl carbonate

Toxicity to microorganisms:EC50 (activated sludge): > 1,000 mg/l

Exposure time: 3 h

Test Type: static test

Method: OECD Test Guideline 209

GLP: yes

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

The value is given in analogy to the following substances: dimethyl carbonate

12.2 Persistence and degradability

no data available

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

12.6 Other adverse effects

no data available

SECTION 13:

13.1 Disposal considerations

Product

Recycle to process, if possible. Consult your local regional authorities and an expert of disposal. You may be able to dissolve or mix material with a combustible solvent and little by little burn in a chemical incinerator equipped with an afterburner and scrubber system. If a large amount of the substance is burned at a time, an explosion may occur. Observe all federal, state and local regulations when disposing of the substance.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

DOT (US)

UN number: UN 1161	Packing group: II	Class: 3
Proper shipping name: DIMETHYL CARBONATE	Reportable Quantity(RQ):no data available	Poison Inhalation Hazard:no data available
Environmental Hazards: NO		

IMDG

UN number: UN 1161	Packing group: II	EMS-No:no data available
Proper shipping name: DIMETHYL CARBONATE		

IATA

UN number: UN 1161	Packing group: II	Class: 3
Proper shipping name: DIMETHYL CARBONATE		

SECTION 15: Regulatory information

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

SECTION 16: Other information

Prepared By	Regulatory Affairs
	Email: QualityAssurance@aladdinsci.com
Creation Date	17-Jun-2026
Revision Date	17-Jun-2026
Print Date	17-Jun-2026
Revision Summary	SDS sections updated v1

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