

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 : (±)-1,3-Butanediol
Product Number : B119672
Brand : aladdin
CAS-No. : 107-88-0

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/irritation (Category 3), H316

Severe eye injury/eye irritation (Category 2B), H320

2.2 GHS Label elements, including precautionary statements

Pictogram no data available

Signal word Warning

Hazard statement(s)

H226 Flammable liquid and vapor

H316 Causes mild skin irritation

H320 Causes eye irritation

Precautionary statement(s)

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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

Additional precautionary phrases are located throughout the safety data sheet.

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms	: 1,3-Butylene glycol; 1,3-Dihydroxybutane; 1,3-Butanediol
Formula	: C ₄ H ₁₀ O ₂
Molecular weight	: 90.12
CAS No.	: 107-88-0
EC-NO.	: 203-529-7

Component	Classification	Concentration
(±)-1,3-Butanediol		
	no data available	anhydrous, ≥99%

SECTION 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

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Phone: +1 (833) 552-7181 Email: QualityAssurance@aladdinsci.com Website: <https://www.aladdinsci.com/>

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

If swallowed

Do NOT induce vomiting. 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)

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**

Water, Foam, Carbon dioxide (CO₂), Dry powder

Unsuitable extinguishing media

no data available

5.2 Special hazards arising from the substance or mixture

In combustion toxic fumes may form.

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**

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. Do not attempt to take action without suitable protective clothing. 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 or river. Alert the neighbourhood to the presence of fumes or gas.

6.3 Methods and materials for containment and cleaning up

Mix with sand or vermiculite. Sweep up and shovel. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Wash hands thoroughly after handling. Ensure there is sufficient ventilation of the area. Normal measures for preventive fire protection. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Close the container tightly in a dry and ventilated area. Sensitive to humidity, store with argon filling

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

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. The selected protective gloves have to satisfy the specifications of Regulation (EU)2016/425 and the standard EN 374 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 particle respirator type N100 (US) or type P3 (EN 143) 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

If safety requires, prevent further leakage or spillage. Do not let the product enter the sewer.

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	-50°C
f) Initial boiling point and boiling range	207°C
g) Flash point	122°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	1.005
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

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

Moisture proof. Strong heating

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10.5 Incompatible materials

no data available

10.6 Hazardous decomposition products

Carbon monoxide, Carbon dioxide.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral Rat Male 22800 mg/kg

Remarks: (ECHA)

Inhalation: No data available

LD50 percutaneous rabbit ->20000 mg/kg

Remarks: (RTECS)

Skin corrosion/irritation

Skin - Rabbit Result: Mild skin irritation -24 hours Remarks: (RTECS)

Serious eye damage/eye irritation

Eyes - Rabbit Result: Irritating to eyes, recovered within 7 days -18 hours Remarks: (ECHA)

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

Test type: Ames test Testing system: Escherichia coli/Salmonella typhimurium Metabolic activation: with or without metabolic activation effect Method: OECD Testing Guidelines 471 Result: Negative Test type: Mutability (mammalian cell test): Negative for chromosomal variation Species: Rat Cell type: Bone marrow Poisoning route: oral route Result: Negative Remarks: (ECHA) Test type: In vivo test Species: Rat Poisoning route: oral route Result: Negative Remarks: (ECHA)

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

Repeated toxicity - no data available

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Registration of toxic effects of chemical substances: EK0440000

To our knowledge, this chemical, physical, and toxic property has not been fully studied.

The nature of the hazard cannot be ruled out, but it should not occur under proper handling

Operate in accordance with good industrial hygiene and safety practices.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity semi-static test for fish LC50- *Oryzias latipes* (Japanese killifish) -> 100 mg/l -96 hours

(OECD Testing Guidelines 203)

Toxicity to *Daphnia magna* and other aquatic Invertebrate

Static test EC50- *Daphnia magna* -> 1000 mg/l -48 hours

(OECD Testing Guidelines 202)

Static toxicity test on algae ErC50- *Desmodesmus subspicatus* (*Pseudomonas aeruginosa*) -> 1070 mg/l

-72 hours

(OECD Testing Guidelines 201)

12.2 Persistence and degradability

Aerobic - Exposure time 29 days Result: 81% - rapidly biodegradable. (OECD Test Guide 301B)

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

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Consult state, local or national regulations for proper disposal. Hand over to authorised disposal company as hazardous waste.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

DOT (US)

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

IMDG

UN number: no data available	Packing group: no data available	EMS-No: no data available
Proper shipping name: no data available		

IATA

UN number: no data available	Packing group: no data available	Class: no data available
Proper shipping name: no data available		

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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