

# SAFETY DATA SHEET

Version: v1

Revision Date: 2025-09-11

Print Date: 2025-09-12

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

### 1.1 Product identifiers

Product name : (-)-Borneol  
Product Number : B118615  
Brand : aladdin  
CAS-No. : 464-45-9

### 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)

### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Warning

Hazard statement(s)

H228 Flammable solid  
H316 Causes mild skin irritation  
H317 May cause an allergic skin reaction  
H402 Harmful to aquatic life

Precautionary statement(s)

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|           |                                                                                                    |
|-----------|----------------------------------------------------------------------------------------------------|
| P210      | Keep away from heat, hot surface, sparks, open flames and other ignition sources. -<br>No smoking. |
| P240      | Ground/bond container and receiving equipment.                                                     |
| P241      | Use explosion-proof [electrical/ventilating/lighting/...] equipment.                               |
| P280      | Wear protective gloves/protective clothing/eye protection/face protection.                         |
| P370+P378 | In case of fire: Use ... to extinguish.                                                            |

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

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

|                  |                                                              |
|------------------|--------------------------------------------------------------|
| Synonyms         | : 2-camphanol 1,7,7-trimethyl-endo-Bicyclo[2.2.1]heptan-2-ol |
| Formula          | : C <sub>10</sub> H <sub>18</sub> O                          |
| Molecular weight | : 154.25                                                     |
| CAS No.          | : 464-45-9                                                   |
| EC-NO.           | : 208-080-0                                                  |

| Component   | Classification    | Concentration          |
|-------------|-------------------|------------------------|
| (-)-Borneol | no data available | analytical<br>standard |

## 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

Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### 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

no data available

### 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 water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### Unsuitable extinguishing media

no data available

### 5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products formed under fire conditions.- Carbon oxides

### 5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

### 5.4 Further information

Use water spray to cool unopened containers.

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment.Avoid dust formation.Avoid breathing vapors, mist or gas.Ensure adequate ventilation.Remove all sources of ignition.Evacuate personnel to safe areas.Avoid breathing dust.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so.Do not let product enter drains.Discharge into the environment must be avoided.

### 6.3 Methods and materials for containment and cleaning up

Sweep up and shovel.Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13).Keep in suitable, closed containers for disposal.Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13).

### 6.4 Reference to other sections

no data available

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes.Avoid formation of dust and aerosols.Provide appropriate exhaust ventilation at places where dust is formed.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge.

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**7.2 Conditions for safe storage, including any incompatibilities**

Store in cool place.Keep container tightly closed in a dry and well-ventilated place.

**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 EN 166(EU).

**Skin protection**

Handle with gloves.Gloves must be inspected prior to use.Use proper glove removal technique (without touching gloves 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**

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 full-face 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**

no data available

**SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

|                                            |                                         |
|--------------------------------------------|-----------------------------------------|
| a) Appearance                              | form: crystallization color: colorless  |
| b) Odour                                   | no data available                       |
| c) Odour Threshold                         | no data available                       |
| d) pH                                      | no data available                       |
| e) Melting point/freezing point            | 206 - 209 °C (403 - 408 °F)             |
| f) Initial boiling point and boiling range | 210 °C (410 °F) at 1,013 hPa (760 mmHg) |

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|                                                 |                                       |
|-------------------------------------------------|---------------------------------------|
| g) Flash point                                  | 65 °C (149 °F) - closed cup           |
| 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                              | 44.7 hPa (33.5 mmHg) at 25 °C (77 °F) |
| 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

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

Heat, flames and sparks. Extremes of temperature and direct sunlight.

### 10.5 Incompatible materials

Strong oxidizing agents

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions.- Carbon oxides

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Acute toxicity

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Skin - rabbit - Mild skin irritation - 24 h

**Skin corrosion/irritation**

no data available

**Serious eye damage/eye irritation**

no data available

**Respiratory or skin sensitisation**

May be harmful if inhaled. May cause respiratory tract irritation.

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**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**

May be harmful if inhaled. May cause respiratory tract irritation.

**Additional Information**

no data available

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## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 67.8 mg/l - 96 h

### 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

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

### 12.6 Other adverse effects

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no data available

**SECTION 13:****13.1 Disposal considerations****Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**

Dispose of as unused product.

**SECTION 14: Transport information****DOT (US)**

UN number: 1312

Proper shipping name: Borneol

Packing group: III

Reportable Quantity(RQ): no data available

Class: 4.1

Poison Inhalation Hazard: no data available

Environmental Hazards: No

**IMDG**

UN number: 1312

Proper shipping name: Borneol

Packing group: III

EMS-No: no data available

**IATA**

UN number: 1312

Proper shipping name: Borneol

Packing group: III

Class: 4.1

**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

ALADDIN SCIENTIFIC CORPORATION

Email: QualityAssurance@aladdinsci.com

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SDS sections updated v1

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