# Material Safety Data Sheet

**Product name:** (-)-Borneol

**Catalogue number:** 5006 S

**CAS NUMBER:** 464-45-9

**EC Number:** 207-353-1

**Supplier:** EXTRASYNTHESE

**Address:** Z.I Lyon Nord

**Impasse Jacquard - C.S 30062

**Phone:** (33)(0)478-98-20-34

**Fax:** (33)(0)478-98-19-45

**Emergency call number ORFILA (France):** Tel: (33)(0)145-42-59-59

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## 2. Hazards Identification

**Classification of the substance / mixture**

According to Regulation (EC) No 1272/2008

- Flammable Solids (Category 2) ; H228
- Skin Sensitisation (Category 1) ; H317

**Label elements**

- **Warning:**
  - SGH07 SGH02

- **Hazard statements**
  - H228 Flammable solid
  - H317 May cause an allergic skin reaction

- **Precautionary statements**
  - P262 Do not get in eyes, on skin, or on clothing.
  - P280 Wear protective gloves/protective clothing/eye protection/face protection.
  - P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

**Supplemental hazard information**

None

**Other hazards**

None

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## 3. Composition / Information on Ingredients

- **Product name:** (-)-Borneol

- **Empirical formula:** C\(_{10}\)H\(_{18}\)O

- **CAS NUMBER:** 464-45-9

- **Synonyms:**

- **EC Number:** 207-353-1

**Other hazardous ingredients**

No data available.

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## 4. First Aid Measures

**Inhalation**

In case of inhalation, move the victim to fresh air. If breathing is difficult, put the victim on oxygen. If breathing stops, carry out artificial respiration.

**In case of skin contact**

Wash thoroughly with water and soap.

**In case of eye contact**

Rinse well with plenty of water for at least 15 minutes.

**Ingestion**

Do not make an unconscious person vomit or swallow anything. Rinse the mouth thoroughly with water.
5. FIRE-FIGHTING MEASURES

Extinguishing media
Carbon dioxide, dry powder.

Special hazards arising from the substance
Harmful/toxic vapours, carbon oxides may be released during the fire.

Advise for fire-fighters
Wear an autonomous breathing apparatus and suitable protection clothing against chemical agents.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Evacuate the personnel from the contaminated zone. Ensure adequate ventilation.

Environmental precautions
Keeping away from drains, surface and ground waters.

Methods and materials for containment and cleaning up
Clean up without creating dust and place in adapted and sealed containers for elimination. Wash the contaminated area with water and soap. Confining washing water and dispose of it complying with the local regulations. After cleaning, quickly eliminate traces of water with a product absorbing liquids (for example: sand, sawdust, universal binder, Kieselguhr).

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid formation of dust. Avoid contact with skin and eyes. During handling, wear suitable personal protective equipment (see section 8). Follow the normal measures for preventive fire protection.

Specific handling
No data available.

Specific end use(s)
No data available.

Conditions for safe storage, including any incompatibilities
Store in a cool well-ventilated place. Keep container tightly closed in a dry place away from light.
Store at <+8°C

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Respiratory protection
Wear imperatively an appropriated mask/respirator, tested and approved by standards such as NIOSH (US) or CEN (EU).

Hand protection
Handle with protective gloves. The selected gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Eye protection
Wear safety glasses.

Skin protection
Wear suitable protective clothing according to the quantity and the level of activity of the substance at the workplace.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Solid</td>
</tr>
<tr>
<td>Solubility in</td>
<td>No data available.</td>
</tr>
<tr>
<td>Acetone (Soluble)</td>
<td></td>
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<tr>
<td>Ethyl alcohol (Soluble)</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>No data available.</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available.</td>
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<tr>
<td>Auto-ignition temperature</td>
<td>No data available.</td>
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<tr>
<td>Decomposition temperature</td>
<td>No data available.</td>
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<tr>
<td>Viscosity</td>
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<tr>
<td>Initial boiling point</td>
<td>210°C</td>
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<tr>
<td>Flash point</td>
<td>65°C</td>
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<tr>
<td>Melting point</td>
<td>207 - 208°C</td>
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</tbody>
</table>

Other information
No data available.
10. STABILITY AND REACTIVITY

Reactivity
No data available.

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
No hazardous reactions during storage and handling complying with the instructions.

Conditions to avoid
No data available.

Incompatible materials
No data available.

Hazardous decomposition products
No hazardous decomposition products if the instructions for handling and storage are respected. During high overheating of the substance or during a fire, hazardous decomposition products may be produced.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity
No data available.

Acute dermal toxicity
No data available.

Acute inhalation toxicity
No data available.

Skin Corrosion
No data available.

Skin Irritation
No data available.

Serious Eye Damage
No data available.

Eye Irritation
No data available.

Respiratory Sensitisation
No data available.

Skin Sensitisation
No data available.

Germ Cell Mutagenicity
No data available.

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.
12. ECOLOGICAL INFORMATION

Toxicity
LC50 - Pimephales promelas - 67.8 mg/l - 96h

Persistence and degradability
No data available.

Bioaccumulative potential
No data available.

Mobility in soil
No data available.

Results of PBT and vPvB assessment
No data available.

Other adverse effects
No data available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods
Non-recyclable surplus and solutions must be sent to a licensed professional waste disposal service, while respecting the local statutory instructions. Contaminated packaging is to be eliminated in the same way as the product that is contained.

14. TRANSPORT INFORMATION

IATA
Borneol
UN 1 312
Class 4.1
Packaging group 3

RID/ADR
Borneol
UN 1 312
Class 4.1
Packaging group 3

Environmental hazards
No

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance
Directive 96/82/CE (SEVESO category/named substances) : not applicable.
Regulation CE 2037/2000 (substances that deplete the ozone layer) : not applicable.
Regulation 850/2004 (persistent organic pollutants) : not applicable.
Regulation REACH-Titre VII (authorisations) et Titre VIII (restrictions) : not applicable.

Chemical safety assessment
Not applicable.

16. OTHER INFORMATION

Use
The information contained in this safety data sheet are based on our experience and our current knowledge. The data may in no case be considered as product specifications. It is provided for information purposes only with no obligation on our part. In this respect, we shall not be held liable for the use which is made of our products and for the information given above.

Abbreviations and acronyms
ADR: Agreement on Dangerous Goods by Road
RID: Regulations concerning the International Transport of Dangerous Goods by Rail
IATA: International Air Transport Association
CAS: Chemical Abstract Service
PBT: Persistent, Bioaccumulative and Toxic
vPvB: Very Persistent and Very Bioaccumulative