

**Material safety data sheet**  
According to EU Regulation 1907/2006 in the current version  
**BISABOLOL**

**1. Identification of the substance/mixture and company**

Trade name: Bisabolol  
Natural alpha bisabolol obtained by distillation from the Candeia tree  
INCI Bisabolol  
CAS No. : 23089-26-1  
EC No. : 245-423-3  
REACH pre-registration No. : na  
Utilization: Raw material for cosmetic use  
Supplier company identification: Elemental SRL, Piața Cazărmii no.15, 410188-Oradea, jud.Bihor, România  
Tel/Fax: +40259-436.755, [www.ellemental.com](http://www.ellemental.com)  
Emergency: RO: număr național pentru cazuri de urgență: 021 3183606 Institutul de Sănătate Publică București.  
International emergency number: +49 180 2273-112

**2. Hazards Identification**

2.1 Classification of the substance or mixture  
Classification (REGULATION (EC) No 1272/2008)  
Long-term (chronic) aquatic hazard, Category 3  
H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard statements: H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

Prevention: P273 Avoid release to the environment.

Response: P391 Collect spillage

Disposal: P501 Dispose of contents/ container to an approved waste disposal plant.



2.3 Other hazards

This substance contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**3. Declaration of ingredients**

3.1. Substances

Identification of the substance: NATURAL BISABOLOL <= 100 % w/w

Chemical name: Levomenol / 3-cyclohexene-1-methanol,  $\alpha$ -4-dimethyl- $\alpha$ -(4-methyl-3-pentenyl)-, [S-(R\*,R\*)]-

3.1 Mixtures

N.A.

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#### 4. First aid measures

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##### 4.1 Description of first aid measures

General advice:

Remove/Take off immediately all contaminated clothing. Get medical advice/ attention if you feel unwell.

If inhaled: If inhaled, remove to fresh air.

Get medical advice/ attention.

In case of skin contact: In case of contact with skin, wash off repeatedly with polyethylene glycol 400 or edible oil, alternating with water and soap, for at least 15 to 20 minutes.

Consult a physician.

In case of eye contact: In case of eye contact, rinse repeatedly with polyethylene glycol 400 or edible oil, alternating with water, for at least 15 to 20 minutes.

If swallowed: If swallowed do not induce vomiting, seek medical advice and show safety datasheet or label

##### 4.2 Most important symptoms and effects, both acute and delayed

Symptoms: No symptoms known or expected.

Risks: No additional hazards are known except those derived from the labelling.

##### 4.3 Indication of any immediate medical attention and special treatment needed

Treatment: Treat symptomatically.

#### 5. Fire fighting measures

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##### 5.1. Extinguishing media

Suitable extinguishing media: Water spray jet, Alcohol-resistant foam, Dry powder, Carbon dioxide (CO<sub>2</sub>)

Extinguishing media which must not be used for safety reasons: High volume water jet

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

Do not inhale explosion and combustion gases. Burning produces heavy smoke.

Specific hazards during firefighting: In case of fires, hazardous combustion gases are formed: Carbon monoxide (CO)

Carbon dioxide (CO<sub>2</sub>)

##### 5.3. Advice for firefighters

Special protective equipment for firefighters: Self-contained breathing apparatus, Wear suitable protective equipment

Further information: Prevent fire extinguishing water from contaminating surface water or the ground water system.

#### 6. Accidental release measures

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

Personal precautions:

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Evacuate the danger area, observe emergency procedures, consult an expert.

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Advice for emergency responders: Protective equipment see section 8.  
Indications about waste treatment see section 13.

**6.2. Environmental precautions**

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.  
Suitable material for taking up: absorbing material, sand.

**6.3. Methods and material for containment and cleaning up**

Cover drains. Collect, bind, and pump off spills.  
Observe possible material restrictions (see sections 7 and 10).  
Take up with liquid-absorbent material. Dispose of properly. Clean up affected area.

**6.4. Reference to other sections**

Information regarding Safe handling, see chapter 7., For personal protection see section 8., For disposal considerations see section 13..

**7. Handling and storage**

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**7.1 Precautions for safe handling**

Advice on safe handling: When used and handled appropriately no special measures are needed  
Advice on protection against fire and explosion: Observe the general rules of industrial fire protection  
Hygiene measures: Wash hands before breaks and at the end of workday. Use protective skin cream before handling the product. Take off immediately all contaminated clothing and wash it before reuse.

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

Further information on storage conditions: Keep containers tightly closed in a cool, well-ventilated place. Handle and open container with care.

**7.3 Specific end use(s)**

Specific use(s): Apart from the uses mentioned in section 1 no other specific uses are stipulated

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**8. Exposure controls / personal protection**

**8.1. Control parameters**

Contains no substances with occupational exposure limit values.

**8.2. Exposure controls**

Eye protection: Depending on the risk, wear sufficient eye protection (safety glasses with side protection or goggles, and if necessary, face shield.). Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled and must meet the specifications of a standard EN/ISO/DIN. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Hand protection:

Break through time: 480 min

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Glove thickness: 0.7 mm

Remarks: Long-term exposure Impervious butyl rubber gloves

Break through time: 30 min

Glove thickness: 0.4 mm

Remarks: For short-term exposure (splash protection): Nitrile rubber gloves.

Remarks: These types of protective gloves are offered by various manufacturers. Please note the manufacturers' detailed statements, especially about the minimum thickness and the minimum breakthrough time. Consider also the particular working conditions under which the gloves are being used.

Skin and body protection: Wear suitable protective equipment.

Respiratory protection: Not required; except in case of aerosol formation. Use respiratory protection in case of insufficient exhaust ventilation or prolonged exposure

Protective measures: Observe the usual precautions for handling chemicals.

Avoid contact with skin and eyes

## **9. Physical and chemical properties**

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

Appearance: clear liquid

Color: colorless to pale yellow

Odour: characteristic

pH: n.d

Melting point: < -20 °C Method: OECD Test Guideline 102

Boiling point: ca. 301 °C

Flash point: 154 °C

Evaporation rate: not tested.

Flammability (solid, gas): Not applicable

Burning number: Not applicable

Upper explosion limit / upper flammability limit: Not applicable

Lower explosion limit / Lower flammability limit: Not applicable

Vapour pressure: ca. 0.016 hPa (20 °C)

Density: 0.9 - 0.95 g/cm<sup>3</sup> (25 °C)

Bulk density: Not applicable

Solubility(ies) Water solubility: < 1 g/l insoluble

Solubility in other solvents: not tested.

Solvent: lipids

Partition coefficient: n-octanol/water: log Pow: 5,5 (25 °C) (ECHA)

Auto-ignition temperature: not tested.

Decomposition temperature: ca. 300 °C

Heating rate: 3 K/min Method: DSC

Viscosity, dynamic: ca. 170 mPa.s (20 °C)

Viscosity, kinematic: not tested.

Explosive properties: no data available

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Oxidizing properties: Not applicable

**9.2. Other information**

Explosives: Not applicable

Oxidizing properties: none

Self-ignition: 245 °C 1.020 hPa Method: DIN 51794

Surface tension: 57,3 mN/m, 0,0224 g/l, 20 °C, OECD Test Guideline 115

Molecular weight: 222,37 g/mol

**10. Stability and reactivity**

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**10.1. Reactivity**

Stable under normal conditions.

**10.2. Chemical stability**

Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

Reactions possible with: Strong oxidizing agents. No dangerous reaction known under conditions of normal use.

**10.4. Conditions to avoid**

Stable under normal conditions. Avoid strong heating.

**10.5. Incompatible materials**

None in particular.

**10.6. Hazardous decomposition products**

In the event of fire: See section 5.

**11. Toxicological information**

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**11.1. Information on toxicological effects**

**Acute toxicity**

Product:

Acute oral toxicity:

LD50 (Rat, male and female): > 2.000 mg/kg

Method: OECD Test Guideline 423

GLP: yes

Remarks: (ECHA)

Acute inhalation toxicity: No data available

Acute dermal toxicity: No data available

Acute toxicity (other routes of administration): No data available

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**Skin corrosion/irritation**

Product:

Species: Rabbit

Exposure time: 72 h

Method: OECD Test Guideline 404

Result: negative

GLP: yes

Remarks: (ECHA)

**Serious eye damage/eye irritation**

Product:

Species: Rabbit

Exposure time: 72 h

Method: OECD Test Guideline 405

Result: No eye irritation

GLP: yes

Remarks: (ECHA)

**Respiratory or skin sensitisation**

Product: No data available

Germ cell mutagenicity

Product:

Genotoxicity in vitro:

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

GLP: yes

Remarks: (ECHA)

**Carcinogenicity**

Product: No data available

Reproductive toxicity

Product:

Effects on fertility: No data available

Effects on foetal development: No data available

**STOT - single exposure**

Product: No data available

**STOT - repeated exposure**

Product: No data available

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Repeated dose toxicity

Product: No data available

Aspiration toxicity

Product:

No data available

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Further information

Product:

Remarks: Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

Remarks: Handle in accordance with good industrial hygiene and safety practice.

Experience with human exposure

Product:

Skin contact:

Target Organs: Skin

Symptoms: Patch test on human volunteers did not demonstrate irritating properties.

## 12. Ecological information

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12.1. Toxicity

Product:

Toxicity to daphnia and other aquatic invertebrates:

EC50 (Daphnia magna (Water flea)): 2,2 mg/l

Exposure time: 48 h

Test Type: static test

Analytical monitoring: yes

Method: OECD Test Guideline 202

GLP: yes

Remarks: (ECHA)

Toxicity to algae/aquatic plants:

ErC50 (Pseudokirchneriella subcapitata (green algae)): 3,8 mg/l

Exposure time: 72 h

Test Type: static test

Analytical monitoring: yes

Method: OECD Test Guideline 201

GLP: yes

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Remarks: (ECHA)  
EC10 (Pseudokirchneriella subcapitata (green algae)): 0,7 mg/l  
Exposure time: 72 h  
Test Type: static test  
Analytical monitoring: yes  
Method: OECD Test Guideline 201  
GLP: yes  
Remarks: (ECHA)

Toxicity to microorganisms:  
EC50 (activated sludge): > 1.000 mg/l  
Exposure time: 30 min  
Test Type: static test  
Analytical monitoring: no  
Method: ISO 8192  
GLP: yes  
Remarks: (ECHA)

**12.2 Persistence and degradability**

Product:  
Biodegradability:  
Test Type: aerobic  
Inoculum: activated sludge  
Concentration: 100 mg/l  
Result: Readily biodegradable.  
Biodegradation: 70 - 80 %  
Method: OECD Test Guideline 301F  
Remarks: (ECHA)

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

Product:

Assessment: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**12.6 Endocrine disrupting properties**

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Assessment: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**12.7 Other adverse effects**

Product: Additional ecological information: Discharge into the environment must be avoided.

**13. Disposal considerations**

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**13.1. Waste treatment methods**

Product: Product should be taken to a suitable and authorized waste disposal site in accordance with relevant regulations and if necessary after consultation with the waste disposal operator and/or the competent Authorities  
Contaminated packaging: Packaging that cannot be cleaned should be disposed of as product waste

**14. Transport information**

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14.1. UN number: UN3082

14.2 UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (a-Bisabolol)

14.3 Transport hazard class(es): 9

14.4. Packing Group: III

14.5 Environmental hazards: This is an environmentally hazardous substance.

14.6 Special precautions for user: None additional

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable

**15. Regulatory information**

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15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII):

Conditions of restriction for the following entries should be considered: Number on list 3

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59): Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer: Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast): Not applicable

REACH - List of substances subject to authorisation (Annex XIV): Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major accident hazards involving dangerous substances.

Not applicable

Storage class (TRGS 510): 10 - 13, Other liquids and solids

Other regulations: Take note of Dir 94/33/EC on the protection of young people at work

**15.2. Chemical safety assessment**

For this product a chemical safety assessment was not carried out.

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## 16. Additional information

### 16.1 Abbreviations:

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative.

### Revision Note

Safety datasheet sections which have been updated: General revision

### Disclaimer:

This material safety data sheet does not constitute a guarantee of the properties of the product and is not a contractual legal report. The information is given in good faith on the basis of our best knowledge of the product at the indicated time. However, we cannot accept responsibility or liability for any consequences arising from its use, no warranty for correctness and completeness is given. We caution the users against the incurred possible risks when the product is used at other ends than the use for which it was initially planned. It is the user's responsibility during handling, storage and product use to consult the main regulatory texts in force regarding workers and environment protection.