

Safety Data Sheet

Alpha Bisabolol



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1. Identification

| | |
|---------------------------------|--|
| Product Description | Alpha Bisabolol |
| CAS # | 23089-26-1 |
| FEMA Number | Not Available |
| True Terpenes Item # | RM10001 |
| Recommended Use | Concentrated aromatic and flavor ingredient which may be used in flavor and fragrance compounds according to legal and IFRA or FEMA GRAS/FDA guidelines. |
| Recommended Restrictions | For manufacturing use only |
| Company | True Terpenes (888) 954-8550 TrueTerpenes.com |
| Emergency Contact | Poison Control Helpline: 1 (800) 222-1222 |

2. Hazard(s) Identification



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Physical Hazards

Not Classified

Health Hazards

Not Classified

Environmental Hazards

Acute aquatic toxicity

Category 2

Chronic aquatic toxicity

Category 2

Label Elements



Signal Word

None

Hazard Statement

Toxic to aquatic life with long lasting effects.

Precautionary Statement

Prevention

Avoid release to the environment.

Response

Collect spillage.

Storage

Not available.

Disposal

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

Hazard(s) not Otherwise Classified (HNOC)

None

3. Composition / Information on Ingredients



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Substances

| Chemical Name | Common Name and Synonyms | CAS Number | Percent |
|-----------------|--|------------|----------|
| ALPHA BISABOLOL | ((-)-6-Methyl-2-(4-methyl-3-cyclohexen-1-yl)-5-hepten-2-ol Levomenol (-)-alpha-Bisabolol | 23089-26-1 | 90 - 100 |

4. First-Aid Measures

| | |
|---|--|
| Inhalation | If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician. |
| Skin Contact | Wash off with soap and plenty of water. Consult a physician. |
| Eye Contact | Flush eyes with water as a precaution. |
| Ingestion | Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician. |
| Most Important Symptoms / Effects, Acute and Delayed | The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11. |
| Indication of Immediate Medical Attentional and Special Treatment Needed | No data available. |



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General Advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

5. Fire-Fighting Measures

| | |
|--|--|
| Suitable Extinguishing Media | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. |
| Unsuitable Extinguishing Media | No data available. |
| Specific Hazards Arising from the Chemical | No data available. |
| Special Protective Equipment and Precautions for Firefighters | Wear self-contained breathing apparatus for firefighting if necessary. |
| Firefighting Equipment / Instructions | No data available. |
| Specific Methods | No data available. |
| General Fire Hazards | No data available. |

6. Accidental Release Measures



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Personal Precautions, Protective Equipment and Emergency Procedures

Avoid breathing vapours, mist or gas. Ensure adequate ventilation. For personal protection see section 8.

Methods and Materials for Containment and Cleaning Up

Keep in suitable, closed containers for disposal.

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.

7. Handling and Storage

Precautions for Safe Handling

For precautions see section 2.

Conditions for Safe Storage, Including any Incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. Exposure Controls / Personal Protection

Occupational Exposure

Contains no substances with occupational exposure limit values. Hazardous



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| | |
|--|--|
| Limits | components without workplace control parameters. |
| Biological Limit Values | No data available. |
| Appropriate Engineering Controls | Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. |
| Individual Protection Measures, Such as Personal Protective Equipment | |
| Eye / Face Protection | Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). |
| Skin Protection | |
| Hand 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. |
| Other | Impervious 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 | Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). |
| Thermal Hazards | Not available. |
| General Hygiene Considerations | Not available. |



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9. Physical and Chemical Properties

| | |
|---|------------------------------------|
| Appearance | Refer to Spec Sheet |
| Physical State | Liquid |
| Form | Liquid |
| Color | Refer to Spec Sheet |
| Odor | No data available |
| Odor Threshold | No data available |
| pH | No data available |
| Melting Point / Freezing Point | No data available |
| Initial Boiling Point and Boiling Range | No data available |
| Flash Point | 135.00 °C (275.00 °F) - closed cup |
| Evaporation Rate | No data available |
| Flammability (solid, gas) | No data available |
| Upper / Lower Flammability or Explosive Limits | |
| Flammability Limit - Lower (%) | No data available |
| Flammability Limit - Upper | No data available |



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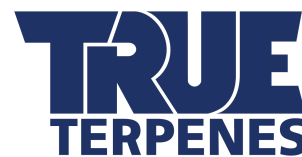
| | |
|--|-------------------------|
| (%) | |
| Explosive Limit - Lower (%) | No data available |
| Explosive Limit - Upper (%) | No data available |
| Vapor Pressure | No data available |
| Vapor Density | No data available |
| Relative Density | 0.929 g/cm ³ |
| Solubility(ies) | |
| Solubility (water) | No data available |
| Partition Coefficient (n-octanol/water) | No data available |
| Auto-ignition Temperature | No data available |
| Decomposition Temperature | No data available |
| Viscosity | No data available |
| Other Information | |
| Explosive Properties | No data available |
| Oxidizing Properties | No data available |

10. Stability and Reactivity



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| | |
|--|---|
| Reactivity | No data available. |
| Chemical Stability | Stable under recommended storage conditions. |
| Possibility of Hazardous Reaction | No data available. |
| Conditions to Avoid | No data available. |
| Incompatible Materials | Strong oxidizing agents. |
| Hazardous Decomposition Products | Hazardous decomposition products formed under fire conditions. - Carbon oxides. Other decomposition products - No data available. In the event of fire: see section 5 |

11. Toxicological Information

Information on Likely Routes of Exposure

| | |
|---|-------------------|
| Inhalation | No data available |
| Skin Contact | No data available |
| Eye Contact | No data available |
| Ingestion | No data available |
| Symptoms Related to the Physical, Chemical and | No data available |



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Toxicological Characteristics

Information on Toxicological Effects

Acute Toxicity

| Product | Species | Test Results |
|-----------|---------|---------------|
| LEVOMENOL | | |
| Oral LD50 | Rat | > 5,000 mg/kg |

Skin Corrosion / Irritation No data available.

Serious Eye Damage / Eye Irritation No data available.

Respiratory or Skin Sensitization

Respiratory Sensitization No data available.

Skin Sensitization No data available.

Germ Cell Mutagenicity No data available.

Carcinogenicity

IARC Monographs. Overall Evaluation of 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.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

US. National Toxicology Program (NTP) Report on Carcinogens



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No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not 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.

Chronic Effects No data available.

12. Ecological Information

Ecotoxicity No data available.

Persistence and Degradability No data available.

Bioaccumulative Potential No data available.

Mobility in Soil No data available.

Other Adverse Effects An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life with long lasting



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effects.

13. Disposal Considerations

| | |
|--|--|
| Disposal Instructions | Offer surplus and non-recyclable solutions to a licensed disposal company. |
| Local Disposal Regulations | No data available. |
| Hazardous Waste Code | No data available. |
| Waste from Residues / Unused Products | No data available. |
| Contaminated Packaging | Dispose of as unused product. |

14. Transport Information

DOT (US)

Not regulated as dangerous goods.

IMDG



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| | |
|----------------------------|--|
| UN Number | 3082 |
| UN Proper Shipping Name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Levomenol) |
| Transport Hazard Class(es) | 9 |
| Subsidiary Class(es) | - |
| Packing Group | III |
| Environmental Hazards | |
| Marine Pollutant | Yes |
| Labels Required | - |

IATA

| | |
|----------------------------|--|
| UN Number | 3082 |
| UN Proper Shipping Name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Levomenol) |
| Transport Hazard Class(es) | 9 |
| Subsidiary Class(es) | - |
| Packing Group | III |
| Environmental Hazards | No |
| Labels Required | - |

Further Information

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.



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15. Regulatory Information

US Federal Regulations

CERCLA Hazardous Substance List (40 CFR 302.4)

Not available.

SARA 304 Emergency Release Notification

Not available.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not available.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not available.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not available.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely Hazardous Substance

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 311/312 Hazardous Chemical

No



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SARA 313 (TRI reporting)

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Other Federal Regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not available.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not available.

Safe Drinking Water Act (SDWA)

Not available.

US State Regulations

Pennsylvania Right To Know Components

Levomenol CAS-No. 23089-26-1

New Jersey Right To Know Components

Levomenol CAS-No. 23089-26-1

California Proposition 65

California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed Substance

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

International Inventories

| Country(s) or Region | Inventory Name | On Inventory (yes/no)* |
|-----------------------------|-----------------------|-------------------------------|
|-----------------------------|-----------------------|-------------------------------|



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| | | |
|-------------------------------|--|---------------|
| Australia | Australian Inventory of Chemical Substances (AICS) | Not Available |
| Canada | Domestic Substances List (DSL) | Not Available |
| Canada | Non-Domestic Substances List (NDSL) | Not Available |
| China | Inventory of Existing Chemical Substances in China (IECSC) | Not Available |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | Not Available |
| Europe | European List of Notified Chemical Substances (ELINCS) | Not Available |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | Not Available |
| Korea | Existing Chemicals List (ECL) | Not Available |
| New Zealand | New Zealand Inventory | Not Available |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Not Available |
| Taiwan | Taiwan Toxic Chemical Substances (TCS) | Not Available |
| United States and Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Not Available |

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

*A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).



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16. Other Information

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Revision Date New Document
Version # 00

HMIS® Ratings

Health 0
Flammability 1
Physical Hazard 0

Disclaimer

True Terpenes cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available. The above information relates only to this product and not to its use in combination with any other material or any particular process and is designed only as guidance for the safe handling, use, processing, storage, transportation, and disposal and should not be considered as a guarantee or quality specification. This product has not been evaluated for safe use in e-cigarettes or any vaping application where the product(s) is/are intentionally vaporized and inhaled. True Terpenes has performed no testing on these products in e-cig/vaping applications. It is the sole responsibility of the individual(s) purchasing this product to assess its' safety in the final



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application. The above information relates only to this product and not to its use in combination with any other material or any particular process and is designed only as guidance for the safe handling, use, processing, storage, transportation, disposal, and should not be considered as a guarantee or quality specification. The above information is based on data provided by and collected from recognized sources such as distributors, manufacturers, and technical groups and is considered to be accurate to the best of True Terpenes knowledge as of the date of this document. It is the responsibility of the user to review all safety information about this product and determine its safety and suitability in their own processes and operations. Appropriate warnings and safe handling procedures should be provided to all handlers and users, taking into account the intended use and the specific conditions and factors relating to such use in accordance with all applicable laws and regulations.

