



SAFETY DATA SHEET (SDS)

Prepared in accordance with the Globally Harmonized System (GHS) and Regulation (EC) No. 1907/2006 (REACH, as amended)

SECTION 1: Identification of the Substance and Company

Product Name: Sabinene Natural

Chemical Name: Sabinene

IUPAC Name: 4-Methylene-1-(propan-2-yl)bicyclo[3.1.0]hexane

CAS Number: 3387-41-5

EC Number: 222-212-4

Molecular Formula: C₁₀ H₁₆

Molecular Weight: 136.24 g/mol

Product Type: Natural Isolate / Monoterpene

Recommended Use: Professional perfumery ingredient, fragrance formulation and cosmetic raw material.

Supplier:

Aromology Trading LLC

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Nadd Al Hamar

Dubai, United Arab Emirates

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SECTION 2: Hazard Identification

2.1 GHS Classification

Sabinene Natural is conservatively classified as:

- Flammable Liquid – Category 3
- Acute Toxicity, Oral – Category 4
- Aspiration Hazard – Category 1
- Skin Irritation – Category 2
- Eye Irritation – Category 2A
- Skin Sensitisation – Category 1
- Specific Target Organ Toxicity, Single Exposure – Category 3, respiratory irritation

Published supplier classifications vary slightly, particularly concerning acute oral toxicity and sensitisation. The classification above follows the more conservative published SDS profile.

2.2 Label Elements

Signal Word



Danger

Hazard Pictograms

- GHS02 – Flame
- GHS07 – Exclamation mark
- GHS08 – Health hazard

Hazard Statements

- H226: Flammable liquid and vapour.
- H302: Harmful if swallowed.
- H304: May be fatal if swallowed and enters airways.
- H315: Causes skin irritation.
- H317: May cause an allergic skin reaction.
- H319: Causes serious eye irritation.
- H335: May cause respiratory irritation.

These hazard statements are consistent with conservative supplier classifications for sabinene.

Precautionary Statements

- P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233: Keep container tightly closed.
- P240: Ground and bond container and receiving equipment.
- P241: Use explosion-proof electrical and ventilation equipment.
- P261: Avoid breathing vapour or mist.
- P264: Wash hands thoroughly after handling.
- P270: Do not eat, drink or smoke when using this product.
- P272: Contaminated work clothing should not be allowed out of the workplace.
- P280: Wear protective gloves, protective clothing and eye protection.
- P301+P310: IF SWALLOWED: Immediately call a poison centre or doctor.
- P302+P352: IF ON SKIN: Wash with plenty of soap and water.
- P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if easy to do. Continue rinsing.
- P331: Do not induce vomiting.
- P333+P313: If skin irritation or rash occurs: Get medical advice.
- P337+P313: If eye irritation persists: Get medical advice.
- P370+P378: In case of fire, use dry chemical powder, carbon dioxide or foam.
- P403+P235: Store in a well-ventilated place. Keep cool.
- P501: Dispose of contents and container according to applicable regulations.

2.3 Other Hazards

Vapours may form flammable mixtures with air.



- Electrostatic charges may accumulate during transfer.
- Swallowing followed by vomiting may result in aspiration into the lungs.
- Oxidised material may have increased sensitising potential.
- Not intended for direct undiluted application.

SECTION 3: Composition / Information on Ingredients

3.1 Substance

Component	CAS Number	EC Number	Concentration
Sabinene, natural	3387-41-5	222-212-4	Typically $\geq 95\%$

3.2 Chemical Description

Natural sabinene is an unsaturated bicyclic monoterpene isolated or fractionated from botanical essential oils.

Depending on the natural source and purification process, small quantities of other naturally occurring terpenes may remain. The exact purity and minor-component profile should be confirmed through the applicable batch Certificate of Analysis.

SECTION 4: First-Aid Measures

4.1 Description of First-Aid Measures

Inhalation

Remove the affected person to fresh air and keep at rest in a position comfortable for breathing.

Seek medical attention if coughing, dizziness, headache or respiratory irritation occurs.

Skin Contact

Remove contaminated clothing and footwear.

Wash affected skin thoroughly with soap and plenty of water for at least 15 minutes.

Seek medical attention if irritation, redness or an allergic reaction develops.

Wash contaminated clothing before reuse.

Eye Contact

Immediately rinse cautiously with clean water for at least 15 minutes.

Remove contact lenses when present and easy to do.

Continue rinsing and seek medical attention if irritation persists.



Ingestion

Immediately contact a doctor or poison centre.

Do **not** induce vomiting due to the risk of aspiration into the lungs.

Rinse the mouth with water. Never give anything by mouth to an unconscious person.

4.2 Most Important Symptoms and Effects

Possible symptoms include:

- Skin redness, irritation or rash
- Eye pain, redness and watering
- Coughing or respiratory irritation
- Nausea, abdominal discomfort or dizziness
- Lung injury if aspirated after ingestion or vomiting

4.3 Immediate Medical Attention

Treat symptomatically.

Because of the aspiration hazard, medical observation may be required after ingestion, even when no immediate symptoms are present.

SECTION 5: Fire-Fighting Measures

5.1 Suitable Extinguishing Media

Use:

- Alcohol-resistant foam
- Dry chemical powder
- Carbon dioxide
- Water fog or fine spray

5.2 Unsuitable Extinguishing Media

Do not use a direct, high-pressure water jet, as this may spread the burning liquid.

5.3 Specific Hazards

The product is a flammable liquid.

Vapours may:

- Travel along surfaces to a distant ignition source



- Form explosive mixtures with air
- Accumulate in poorly ventilated or low-lying areas

Thermal decomposition or combustion may produce:

- Carbon monoxide
- Carbon dioxide
- Irritating smoke
- Unidentified organic decomposition products

5.4 Advice for Firefighters

Firefighters should wear:

- Self-contained breathing apparatus
- Full protective clothing

Cool exposed containers with water spray. Prevent contaminated firefighting water from entering drains or waterways.

SECTION 6: Accidental Release Measures

6.1 Personal Precautions

- Eliminate all ignition sources.
- Evacuate unnecessary personnel.
- Ensure adequate ventilation.
- Avoid breathing vapours.
- Avoid contact with skin and eyes.
- Wear appropriate protective equipment.
- Use non-sparking tools.

6.2 Environmental Precautions

Prevent the product from entering:

- Drains
- Sewers
- Surface water
- Groundwater
- Soil

Notify the appropriate authorities if a significant environmental release occurs.

6.3 Containment and Cleaning

Contain the spill using sand, earth, vermiculite or another non-combustible absorbent.



Collect absorbed material into properly labelled waste containers.

Clean the contaminated area with a suitable detergent. Do not use equipment that may generate sparks.

SECTION 7: Handling and Storage

7.1 Safe Handling

- Handle in a well-ventilated area.
- Keep away from heat, sparks and flames.
- Avoid breathing vapours and aerosols.
- Avoid contact with skin, eyes and clothing.
- Prevent the accumulation of static electricity.
- Ground and bond bulk-transfer equipment.
- Use explosion-protected equipment where required.
- Do not eat, drink or smoke while handling.
- Wash thoroughly after use.

7.2 Storage Conditions

Store:

- In the tightly sealed original container
- In a cool, dry and well-ventilated area
- Away from sunlight and sources of heat
- Away from ignition sources
- Away from strong oxidising agents
- Preferably under inert gas for extended storage
- In containers suitable for flammable terpene materials

Recommended storage temperature: Below 25°C, unless otherwise specified by the manufacturer.

7.3 Container Materials

Suitable materials may include:

- Lacquered aluminium
- Stainless steel
- Approved fluorinated containers
- Amber glass for laboratory quantities

Confirm packaging compatibility before long-term storage.

SECTION 8: Exposure Controls / Personal Protection

8.1 Control Parameters



No specific occupational exposure limit has been established for sabinene in many jurisdictions.

Exposure should be kept as low as reasonably achievable through good industrial hygiene and ventilation.

8.2 Engineering Controls

Provide:

- Effective general ventilation
- Local exhaust ventilation at transfer or filling points
- Explosion-protected ventilation where vapours may accumulate
- Accessible eyewash and safety-shower facilities

8.3 Personal Protective Equipment

Eye and Face Protection

Wear chemical safety goggles. Use a face shield during bulk transfer where splashing is possible.

Hand Protection

Wear chemical-resistant gloves, such as:

- Nitrile rubber
- Fluorocarbon rubber

Glove suitability and breakthrough time should be confirmed with the glove manufacturer.

Skin and Body Protection

Wear suitable protective clothing and closed footwear.

Respiratory Protection

Where ventilation is inadequate, wear an approved respirator fitted with an organic-vapour filter.

Use supplied-air respiratory protection in confined spaces or during emergencies.

Hygiene Measures

- Wash hands after handling.
- Remove contaminated clothing promptly.
- Keep work clothing separate from personal clothing.
- Do not take contaminated clothing home.

SECTION 9: Physical and Chemical Properties



Property	Typical Information
Appearance	Clear, colourless to pale-yellow liquid
Odour	Fresh, green, woody, spicy and terpene-like
Physical State	Liquid
Molecular Formula	$C_{10}H_{16}$
Molecular Weight	136.24 g/mol
Relative Density at 20 °C	Approximately 0.84–0.87
Boiling Point	Approximately 163–164 °C
Flash Point	Typically approximately 43–50 °C
Refractive Index at 20 °C	Typically approximately 1.465–1.475
Water Solubility	Practically insoluble
Solubility in Alcohol	Soluble
Vapour Pressure	Not established
Auto-Ignition Temperature	Not established
Explosive Properties	Vapours may form explosive mixtures with air
Oxidising Properties	Not classified as oxidising
Partition Coefficient	Expected to be lipophilic
Viscosity	Low-viscosity liquid

Published reference information identifies sabinene as a low-density liquid with a boiling point around 163–164 °C. Exact physical properties may vary with stereochemistry and purity.

SECTION 10: Stability and Reactivity

10.1 Reactivity

No hazardous reaction is expected under recommended handling and storage conditions.

10.2 Chemical Stability

Stable when stored in a tightly closed container away from heat, light and air.

The product may oxidise during prolonged exposure to air.

10.3 Possibility of Hazardous Reactions

Vapours may form flammable or explosive mixtures with air.

Hazardous polymerisation is not expected under normal conditions.

10.4 Conditions to Avoid

Avoid:

- Heat



- Flames
- Sparks
- Static discharge
- Direct sunlight
- Prolonged exposure to air
- Elevated storage temperatures

10.5 Incompatible Materials

- Strong oxidising agents
- Strong acids
- Reactive halogenating agents

10.6 Hazardous Decomposition Products

Thermal decomposition may produce:

- Carbon monoxide
- Carbon dioxide
- Irritating organic fumes

SECTION 11: Toxicological Information

11.1 Likely Routes of Exposure

- Inhalation
- Skin contact
- Eye contact
- Ingestion

11.2 Acute Toxicity

Conservatively classified as harmful if swallowed.

Published classifications are not fully uniform; some suppliers classify sabinene as Acute Toxicity Category 4, while others do not classify it for acute oral toxicity.

11.3 Skin Corrosion/Irritation

Causes skin irritation.

11.4 Serious Eye Damage/Irritation

Causes serious eye irritation.

11.5 Respiratory or Skin Sensitisation



May cause an allergic skin reaction, particularly after repeated exposure or when the material has oxidised.

11.6 Aspiration Hazard

May be fatal if swallowed and enters the airways.

11.7 Specific Target Organ Toxicity

Vapour may cause respiratory irritation following significant exposure.

11.8 Germ-Cell Mutagenicity

Insufficient data are available for classification.

11.9 Carcinogenicity

Not classified as carcinogenic based on currently available information.

11.10 Reproductive Toxicity

Insufficient data are available for classification.

11.11 Symptoms Related to Exposure

Possible symptoms include:

- Irritation
- Redness
- Rash
- Watering eyes
- Coughing
- Headache
- Dizziness
- Nausea

SECTION 12: Ecological Information

12.1 Ecotoxicity

Complete substance-specific ecotoxicological data are not available.

As a hydrophobic terpene, uncontrolled release may adversely affect aquatic organisms. Avoid environmental discharge.

12.2 Persistence and Degradability



Expected to be biodegradable, but batch-specific test data are not available.

12.3 Bioaccumulative Potential

Potential bioaccumulation cannot be excluded due to the product's lipophilic nature.

12.4 Mobility in Soil

Expected to have low water solubility and affinity for organic matter.

12.5 PBT and vPvB Assessment

No definitive assessment is available.

12.6 Other Adverse Effects

Large releases may form a surface film and interfere with oxygen transfer in aquatic environments.

SECTION 13: Disposal Considerations

Dispose of product through an authorised chemical-waste contractor.

Do not:

- Pour into drains
- Discharge into waterways
- Dispose of with ordinary household waste
- Burn in an uncontrolled environment

Contaminated packaging should be emptied, sealed and disposed of in accordance with applicable local regulations.

SECTION 14: Transport Information

Transport Information	Classification
UN Number	UN 1993
UN Proper Shipping Name	Flammable liquid, n.o.s. (Sabinene)
Transport Hazard Class	3
Packing Group	III
Environmental Hazard	Not assigned in this generic SDS
Marine Pollutant	Not assigned unless required by batch-specific classification
Tunnel Restriction Code	Subject to carrier and regional requirements

SECTION 15: Regulatory Information

This SDS has been prepared with reference to:



- Globally Harmonized System of Classification and Labelling of Chemicals
- Regulation (EC) No. 1907/2006 concerning REACH
- Regulation (EC) No. 1272/2008 concerning CLP
- OSHA Hazard Communication Standard, 29 CFR 1910.1200
- Applicable ADR, IMDG and IATA dangerous-goods provisions

Regulatory status and permitted uses must be confirmed for the country in which the material or finished product is marketed.

SECTION 16: Other Information

Full Hazard Statements

- H226: Flammable liquid and vapour.
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- H335: May cause respiratory irritation.

Disclaimer

This Safety Data Sheet is based on publicly available technical and safety information for sabinene and is intended as a professional regulatory template.

Because Sabinene Natural may differ in purity, stereochemical composition, botanical source and minor constituents, the final SDS should be verified against:

- The actual supplier SDS
- Batch-specific analytical data
- Confirmed flash-point testing
- Applicable regional regulations
- The final product composition and intended use

The information does not constitute a product specification or guarantee of particular properties. Users are responsible for determining suitability and compliance for their intended application.

Authorised by

Fozia Khot

Director

Aromology Trading LLC