

# Foreverest Resources Ltd

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## alpha-Phellandrene

98% (99-83-2-98), 85% (99-83-2-85)

alpha-Phellandrene is a colourless to light yellow oily liquid, exuding a distinctive black pepper, fresh, citrus, minty, and herbaceous complex aroma. As an important monoterpene compound, it is widely found in various plant essential oils and exists in both its optical isomer forms (dextrorotatory and laevorotatory).

The right-handed body is existed in cinnamon oil, ginger oil, elemi oil, cumin oil and other plants. The left-handed body is existed in eucalyptus oil, star anise oil, gump couch oil, laurel oil, pepper oil and other plants.

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## Substance Identification

Synonyms

$\alpha$ -Phellandrene | p-mentha-1,5-diene

CAS	N/A
EINECS	202-792-5
FEMA	N/A
HS.CODE	N/A
Molecular Formula	C10H16
Molecular Weight	136.23

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LD50	5700mg/kg
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## Application & Uses

- **Fragrance & Flavour Industry:**
  - As a significant aromatic component, alpha-Phellandrene is widely used in perfumes, cosmetics, food flavours, detergents, and household cleaners, imparting a fresh and pleasant scent to products. Its distinctive black pepper, citrus, minty, and herbaceous complex aroma makes it a crucial component in the synthesis of various fragrances.
- **Pharmaceutical & Health Sector:**
  - Alpha-Phellandrene is utilised as an ingredient in expectorants and natural insecticides. Furthermore, it is noted for its potential antimicrobial, anti-inflammatory, analgesic, and research-explored anti-tumour activities, indicating promise in [pharmaceutical](#) and [health product](#) development.
- **Industrial Applications:**
  - Alpha-Phellandrene plays an important role in chiral catalysis. It is also a key component in the synthesis of functional materials, and serves as an excellent natural solvent for adhesives and sealants, as well as a plasticiser in coatings and polymer production to enhance product performance.

- Agricultural Sector:
  - Given its natural origin and specific biological activities, alpha-Phellandrene is being actively explored as a natural alternative for biopesticides and insect repellents, offering solutions for sustainable agriculture.

## Features & Benefits

- Distinct Optical Isomer Characteristics:
  - Alpha-Phellandrene exists as two clear optical isomers – a right-handed body and a left-handed body. Each isomer possesses a unique boiling point range; for instance, the right-handed isomer boils at 66~88°C (at 2133 Pa), while the left-handed isomer boils at 58~59°C (at 2133 Pa). This isomeric nature allows for precise selection in targeted applications.
- Diverse Natural Plant Origins:
  - These two optical isomers are broadly distributed in various plant essential oils, showcasing their natural versatility. For example, the right-handed isomer is primarily found in cinnamon oil, ginger oil, elemi oil, and cumin oil, among others. Conversely, the left-handed isomer is present in eucalyptus oil, star anise oil, gump couch oil, laurel oil, and pepper oil, to name a few. This differentiated natural occurrence offers rich options for various applications.
- Stable Fundamental Physicochemical Profile:
  - It features a flash point of 49°C and exhibits favourable solubility characteristics, being soluble in ethanol and ethyl ether but insoluble in water. These fundamental attributes ensure its stability and ease of use in various formulations and industrial processes.

## Sales Specification

ITEM	VALUE	TEST METHOD & UNIT
Appearance	Colorless or slightly yellow oily liquid.	
Purity	98 min	@GC, %

ITEM	VALUE	TEST METHOD & UNIT
Appearance	Colorless or slightly yellow oily liquid.	
Purity	85 min	@GC, %

## Package

- Galvanized Iron Drum (new), 25kg net each

## GHS Hazard Statements

H-Code	H226/304/315/317/361/411
P-Code	P201/202/210/233/240/241/242//243/261/264/272/273/280
Response	P301+P310 P303+P361+P353 P308+P313 P331 P333+P313 P370+P378 P391
Storage	P403+P235 P405
Disposal	P501

## Storage

- Environmental & Temperature Control:
  - Store strictly at 6°C to 8°C in a cool, dry, well-ventilated area, and protect from light.
  - Keep away from heat sources and avoid temperature extremes to ensure product stability and quality.
  - Ensure the storage area is cool and well-ventilated.
- Container Management & Prevention:
  - This substance is easily oxidised, hence it requires sealed storage. Ensure containers are tightly closed, preferably full, to prevent volatilisation and

- external contamination, and are clearly labelled.
- Do not reuse empty containers.
- Ground all equipment containing the material to prevent static build-up.
- Hazard Isolation:
  - Keep storage areas away from heat, sparks, open flames, and all sources of ignition.
  - This combustible liquid should be stored in a separate safety storage cabinet or room.
  - Keep away from incompatible materials to prevent hazardous reactions.
- Safe Handling & Inspection:
  - Handle carefully, and stack stably.
  - After prolonged storage, always check quality before use.
- Compliance & Emergency Preparedness:
  - Strictly comply with all safety regulations, particularly those pertaining to combustible liquid storage.
  - Ensure emergency plans are in place for unforeseen circumstances.

## Relation Products

- [para Cymene](#)

## Relation Articles

- [Business Value of  \$\alpha/\beta\$  Phellandrene in Agricultural Application](#)
- [Dipentene, an effective, safe, biodegradable cleaning and degreasing material](#)
- [Ten questions concerning air fresheners and indoor built environments](#)
- [What are the natural terpenes](#)

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## Remark

*The above information is believed to be accurate and presents the best explanation currently available to us. We assume no liability resulting from above content. The technical standards are formulated and revised by customers' requirement and us, if there are any changes, the latest specification will be executed and confirmed in the contract.*

Manage consent