

Technical Data Sheet (TDS) - Terpineol

Revision Date: 18 FEB 2026

Product Name

Terpineol 萜品醇 CAS Number: 8000-41-7 MDL Number: MFCD00080676 Main Formula: C₁₀ H₁₈ O (α-Terpineol as main component, mixed with β/γ isomers) Molecular Weight: 154.25 g/mol (pure α-Terpineol) Form: Colorless to pale yellow liquid with characteristic floral-pine aroma

1. Product Overview

Terpineol is a high-purity pharmaceutical/fragrance grade **monoterpene alcohol** (mixed isomers, α-Terpineol as the main active component), derived from natural pine oil distillation and refined by chemical purification. It features a mild and pleasant floral-pine aroma, excellent solubility in organic solvents, and stable physical and chemical properties under normal storage conditions. It is a key raw material widely used in fragrance & flavor, cosmetics, daily chemicals, pharmaceuticals, and fine chemical industries, with functions of flavoring, solubilization, and mild antiseptic auxiliary effect.

2. Technical Specifications (Complies with Industrial & Fragrance Standard)

Item	Specification
Appearance	Colorless to pale yellow clear liquid, no sediment or turbidity
Odor	Characteristic floral pine aroma, no pungent/off-odor
Total Terpineol Content (α+β+γ)	≥ 95.0%
α-Terpineol Content	≥ 80.0%
Relative Density (25/25°C)	0.930 ~ 0.940
Refractive Index (25°C)	1.475 ~ 1.485
Acid Value (mg KOH/g)	≤ 1.0
Boiling Range	214 ~ 220°C
Flash Point (Closed Cup)	≥ 88°C
Water Content	≤ 0.5%
Heavy Metals (Pb)	≤ 5 ppm
Heavy Metals (As)	≤ 1 ppm
Residue on Evaporation	≤ 0.1%
Solubility	Soluble in ethanol, ether, propylene glycol; slightly soluble in water
Temperature Stability	Stable at 0~40°C (aroma and purity retention ≥ 98% for 12 months)
Light Stability	Stable under protected light; avoid direct strong sunlight

3. Product Advantages

- High Purity & Pure Aroma:** Total terpineol content ≥95%, α-terpineol ≥80%, no off-odor, meets high-end fragrance and cosmetic raw material requirements.
- Stable Properties:** No degradation under normal storage/use conditions, no color change or aroma loss, consistent batch-to-batch quality.
- Good Compatibility:** Soluble in most organic solvents and cosmetic base materials, no phase separation or precipitation, easy to formulate.
- Multi-functional Application:** Not only a high-quality flavoring agent, but also has mild solubilization and antiseptic auxiliary effects, reducing the use of other additives.
- Dual Source Option:** Natural pine oil derived and synthetic grade available, meeting different industry raw material requirements.
- Compliant with Global Standards:** Meets EU REACH, US FDA, China GB fragrance/cosmetic raw material safety standards, no restricted ingredients.

4. Application Fields



NEWAY SINOPHC TECH. LIMITED

ADD:RM. 204, BUILDING 3, NO. 188, AONA RD., CHINA (SHANGHAI) PILOT FREE TRADE ZONE.
Email:marketing01@newayphc.com; Phone:+86-021-50350029 <https://www.newayphc.com>

- **Fragrance & Flavor Industry:** Daily chemical fragrances (perfume, soap, detergent), food flavors (bakery, beverage, candy), tobacco flavoring; as a core floral/pine note raw material, blended with other fragrances.
- **Cosmetic & Daily Chemicals:** Skin care products (lotion, cream), hair care products (shampoo, conditioner), oral care (toothpaste, mouthwash); for flavoring and mild solubilization.
- **Pharmaceutical Industry:** Excipient for oral and topical pharmaceuticals, flavoring agent for pediatric drugs, raw material for some antiseptic and anti-inflammatory preparations.
- **Fine Chemicals:** Solvent for resin, paint and coating, plasticizer for rubber products, raw material for terpene resin synthesis.
- **Other Fields:** Mosquito repellent raw material, air freshener, industrial deodorant auxiliary agent.

5. Usage Methods

Dosage (Adjust according to application field and formulation requirements)

- **Fragrance & Cosmetics:** 0.1~5.0% (mass ratio) of the total formulation; adjust according to aroma intensity demand.
- **Food Flavors:** 0.001~0.1% (mass ratio), comply with national food additive dosage standards.
- **Pharmaceuticals:** 0.05~1.0% (mass ratio) as flavoring excipient.
- **Fine Chemicals:** 5~20% (mass ratio) as solvent/plasticizer, stir evenly during formulation.

Key Processing Requirements

- Mix with organic solvents/auxiliaries first before adding to aqueous formulations to improve solubility; can be used with solubilizers (e.g., propylene glycol) if needed.
- Operate in a well-ventilated area, avoid direct contact with open fire (flammable liquid).
- The formulated product should be stored in a sealed container to prevent aroma volatilization.

6. Packaging & Storage

Packaging Specifications

- 500 mL brown glass bottle (laboratory/food/cosmetic small-batch use)
- 25 L HDPE plastic drum (sealed, industrial small-scale use)
- 200 L galvanized iron drum (sealed, bulk industrial use)
- 1000 L IBC tote (food/fragrance grade, large-scale production use)
- Custom packaging (brown glass/HDPE) available for cosmetic/food grade requirements.

Storage Conditions

- **Core Requirement:** Store in a **cool, dry, well-ventilated warehouse** at 0~30°C; avoid direct sunlight, high temperature (>40°C) and open fire.
- Keep the container tightly sealed to prevent aroma volatilization, moisture absorption and oxidation; protect from light (brown glass/opaque packaging).
- Store separately from strong oxidants, strong acids, strong bases and flammable materials; no mixed storage with food/cosmetic raw materials without isolation.
- **Shelf Life:** 18 months (unopened, under specified storage conditions); use as soon as possible after opening, and seal tightly after each use.

Transportation

- Classified as **flammable liquid (low hazard)**, transport by ordinary closed chemical cargo vehicles; avoid open transport.
- Use shockproof, sealed and light-proof packaging; avoid package collision, leakage, direct sunlight and high temperature during transport.
- Do not transport with strong oxidants, strong acids, strong bases and open fire goods; take fire prevention measures during transport.

7. Safety & Protection

- The product is a flammable liquid, keep away from open fire, heat sources and static electricity during handling and use.
- Wear **chemical safety goggles, nitrile rubber gloves and anti-static protective clothing** during large-scale handling; wear a gas mask in poorly ventilated areas to avoid excessive inhalation of vapor.
- **Skin Contact:** Rinse the affected area with plenty of running water and soap for 5~10 minutes; mild irritation may occur in sensitive individuals, no special treatment for most cases.