

## Technical Data Sheet (TDS)

Issue Date: 18 FEB 2026 Version: V1.0

### 1. Product Overview

- **Product Name:** Terpinyl Acetate
- **CAS Number:** 80-26-2
- **Molecular Formula:** C<sub>12</sub>H<sub>20</sub> O<sub>2</sub>
- **Molecular Weight:** 196.29 g/mol
- **Chemical Source:** Synthetic fine chemical (synthesized via esterification of terpineol and acetic anhydride; purified by distillation and rectification to ensure high purity and pure aroma; optimized synthetic process for food/cosmetic/fragrance grade quality, meeting international safety standards).
- **Product Trait:** Colorless clear liquid with a characteristic fresh piney, floral and woody aroma; slightly soluble in water, freely soluble in organic solvents/vegetable oils; combustible liquid with good chemical stability in neutral/weakly acidic environments; mild hydrolysis in strong acid/alkali; food/cosmetic/fragrance grade available for different application scenarios.
- **Core Properties: Multi-purpose ester raw material** with a fresh piney-floral aroma; excellent fragrance fixative property (enhances fragrance longevity); good solvency for organic compounds; approved as food additive (FEMA GRAS) and cosmetic raw material; low toxicity, high safety for daily use; compatible with most fragrance/daily chemical/food excipients.
- **Main Application:** Fragrance raw material (perfume, cologne, soap, shampoo); food flavoring agent (bakery, beverage, candy); industrial solvent (coatings, inks, adhesives, textile auxiliaries); cosmetic raw material (lotion, cream, perfume); botanical extract and essential oil modifier.

### 2. Technical Specifications (Food/Fragrance/Industrial Grade, Complies with IFRA/FEMA/GB Standards)

| Item   | Specification (All Grades)                    |
|--|---|
| Appearance                                       | Colorless to pale yellow clear liquid         |
| Odor   | Characteristic piney, floral, fresh aroma     |
| Assay (Terpinyl Acetate)                         | ≥ 98.0%                                       |
| Refractive Index (n <sub>20</sub> <sup>D</sup> ) | 1.4640-1.4680                                 |
| Relative Density (20/20°C)                       | 0.930-0.938                                   |
| Acid Value (mg KOH/g)                            | ≤ 1.0   |
| Water Content                                    | ≤ 0.1%  |
| Heavy Metals (Pb)                                | ≤ 5 ppm                                       |
| Heavy Metals (As)                                | ≤ 1 ppm                                       |
| Residue on Evaporation                           | ≤ 0.05%                                       |
| Flash Point (Closed Cup)                         | ≥ 88°C  |
| Viscosity (25°C)                                 | 3.0-3.5 mPa s                                 |
| Density (25°C)                                   | 0.930-0.938 g/cm <sup>3</sup>                 |
| Solubility                                       | Freely soluble in ethanol/ether/vegetable oil |
| Food Grade Compliance                            | FEMA GRAS 3055, GB 2760                       |
| Fragrance Grade Compliance                       | IFRA, EU Cosmetics Regulation                 |

### 3. Product Advantages

1. **Pure & Pleasant Aroma:** High purity (≥98.0%) with no off-flavor; characteristic fresh piney-floral aroma, suitable for a variety of fragrance formulations; excellent fragrance fixative effect, prolongs fragrance longevity by 30-50%.
2. **Multi-Grade Availability:** Food (FEMA GRAS), cosmetic (EU/China certified) and industrial grade available; meets different international regulatory standards for various application scenarios, one raw material for multiple uses.



# 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>

- Good Compatibility:** Freely soluble in most organic solvents, vegetable oils and fragrance raw materials; compatible with common food/cosmetic/daily chemical excipients (no adverse reaction); easy to formulate and process.
- Stable Chemical Property:** Good stability in neutral/weakly acidic environments and normal processing temperature ( $\leq 80^{\circ}\text{C}$ ); slow evaporation rate, maintains aroma/solvency effect for a long time; no color change or aroma deterioration under sealed storage.
- High Safety:** Low toxicity (FEMA GRAS, FDA approved); no skin sensitization, mild irritation only with direct prolonged contact; safe for human use in food/cosmetic/fragrance formulations at recommended doses.
- Environmentally Friendly:** Readily biodegradable ( $\text{BOD}_5 / \text{COD}=0.75$ ); no bioaccumulation, no persistent environmental residues; low aquatic toxicity, meets global environmental protection standards for industrial/fragrance raw materials.

## 4. Application Fields

### 4.1 Fragrance & Daily Chemical Industry

- Perfume/Cologne:** Core raw material for pine, floral, woody and fresh fragrance formulations; added at 5-15% (w/w) as a fragrance and fixative; compatible with lavender, rose, citrus and pine essential oils.
- Daily Chemicals:** Shampoo, soap, body wash, laundry detergent; added at 0.1-1.0% (w/w) to provide fresh piney aroma; good stability in surfactant systems, no aroma loss during storage.
- Cosmetics:** Lotion, cream, makeup; added at 0.05-0.5% (w/w) as a mild fragrance agent; meets EU/China cosmetic raw material safety standards, no irritation to skin at recommended doses.

## 5. Usage & Formulation Guidelines

### 5.1 Recommended Addition Dosage (w/w, Adjust according to scenario)

| Application Field                   | Grade            | Addition Dosage |
|-------------------------------------|------------------|-----------------|
| Perfume/Cologne                     | Fragrance Grade  | 5-15%           |
| Shampoo/Soap/Daily Chemicals        | Fragrance Grade  | 0.1-1.0%        |
| Cosmetics (Lotion/Cream)            | Cosmetic Grade   | 0.05-0.5%       |
| Food (Bakery/Candy)                 | Food Grade       | 0.001-0.01%     |
| Food (Beverages)                    | Food Grade       | 0.0005-0.005%   |
| Industrial Solvents (Coatings/Inks) | Industrial Grade | 5-20%           |
| Textile Auxiliaries                 | Industrial Grade | 1-5%            |

## 6. Packaging & Storage

### 6.1 Packaging Specifications (Anti-Leakage, Flammable Liquid Grade)

- Food/Cosmetic/Fragrance Grade:**
  - 100 mL/500 mL Amber glass bottle (laboratory/R&D/small-batch use, light protection)
  - 5 L/20 L HDPE plastic drum (medium-batch production use, anti-leakage)
- Industrial Grade:**
  - 25 L/200 L HDPE plastic drum (bulk production use, anti-leakage)
  - 1000 L IBC tote (large-scale industrial use, explosion-proof valve)
- Custom packaging (1 L/2 L) available for R&D and small-batch formulation needs (all **anti-leakage**).

## 7. Safety & Protection

- The product is a Class 3 flammable liquid with mild skin/eye/respiratory irritation; **all operations must be conducted by trained professional personnel** with full specified PPE (mist mask, chemical-resistant safety goggles, nitrile rubber gloves, flame-retardant lab coat).
- Operate in a well-ventilated area with no ignition sources; avoid generating vapor/mist; do not inhale vapor or contact with skin/eyes for a long time; no eating/drinking/smoking in the work area.
- In case of eye contact: Immediately rinse with plenty of running water for 10-15 minutes and consult a doctor if irritation persists. In case of skin contact: Rinse with water/soap for 5 minutes; apply mild moisturizer for dry/irritated skin.