

## Technical Data Sheet (TDS)

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### 1. Product Overview

- **Product Name:** Anisyl Acetate
- **Chemical Name:** 4-Methoxybenzyl acetate; p-Anisyl acetate
- **CAS Number:** 104-21-2
- **Molecular Formula:** C<sub>10</sub> H<sub>12</sub>O<sub>3</sub>
- **Molecular Weight:** 180.20 g/mol
- **Product Trait:** Colorless clear liquid with characteristic sweet floral-aniseed, honey-like aromatic odor; combustible liquid (Category 4); mild skin/eye irritation; high purity, excellent fragrance retention, low volatility; slightly soluble in water, miscible with most organic solvents and vegetable oils. **FOR FOOD FLAVOR, FRAGRANCE, COSMETIC, PHARMACEUTICAL AND INDUSTRIAL USE ONLY.**
- **Core Properties:** High purity (≥98.0%, food/fragrance/cosmetic grade ≥99.0%); authentic floral-aniseed fragrance with long-lasting effect; stable under normal storage/use conditions; compliant with global food/fragrance/cosmetic standards (GB 2760, FDA GRAS, IFRA); excellent compatibility with most flavor/fragrance/cosmetic/pharmaceutical raw materials; low volatility reduces fragrance loss in formulations.
- **Main Application:** Food flavor ingredient (aniseed, sweet, floral flavor formulation); fragrance/cosmetic raw material (perfume, skin care, hair care products); pharmaceutical intermediate (synthesis of anti-inflammatory, antibacterial drugs); industrial aromatic chemical (fragrance synthesis, daily chemical product fragrance); fragrance fixative for high-end perfume and cosmetic formulations.

### 2. Technical Specifications (Food/Fragrance/Cosmetic/Pharmaceutical/Industrial Grade)

Item	Specification (Industrial Grade)	Specification (Food/Fragrance/Cosmetic/Pharm Grade)
Appearance	Colorless to pale straw yellow clear liquid	Colorless clear liquid
Assay (Anisyl Acetate)	≥98.0% (GC)	≥99.0% (GC)
Boiling Point	258-262°C	259-261°C
Refractive Index (n <sub>20</sub> <sup>D</sup> )	1.4970-1.5010	1.4980-1.5000
Relative Density (20/20°C)	1.080-1.084	1.081-1.083
Flash Point (Closed Cup)	≥115°C	118±1°C
Water Content	≤0.1%	≤0.05% (Karl Fischer)
Residue on Ignition	≤0.1%	≤0.05%
Heavy Metals (Pb)	≤5 ppm	≤1 ppm (AAS)
Heavy Metals (As)	≤1 ppm	≤0.5 ppm (AFS)
Ethanol Solubility	Miscible (1:20 in 95% ethanol), clear	Miscible (1:30 in 95% ethanol), clear
Fragrance	Floral-aniseed odor, no off-flavor	Pure sweet floral-aniseed odor, no off-flavor
Stability	Stable at 0-40°C	Stable at 0-50°C (fragrance retention ≥96%)
pH Value (25°C)	6.8-7.2	6.9-7.1
Viscosity (25°C)	5.0-6.0 mPa·s	5.3-5.7 mPa·s

### 3. Product Advantages

- High Purity & Premium Fragrance:** Assay  $\geq 98.0\%$  (food/fragrance grade  $\geq 99.0\%$ ) with ultra-low impurities and heavy metals; authentic sweet floral-aniseed honey-like fragrance, no synthetic off-flavor; FDA GRAS certified for food use, IFRA compliant for fragrance/cosmetic use, ideal for high-end food flavor and perfume formulation.
- Excellent Fragrance Retention:** Low volatility and high thermal stability; fragrance retention  $\geq 96\%$  at  $50^{\circ}\text{C}$ ; acts as an effective fragrance fixative to prolong the fragrance duration of formulations (8-24 hours) in cosmetics and perfumes.
- Stable & Good Compatibility:** Stable under normal storage/processing conditions ( $\leq 100^{\circ}\text{C}$ ); no fragrance loss or discoloration; compatible with most food/fragrance/cosmetic/pharmaceutical raw materials (sugars, oils, humectants, excipients, fragrance fixatives); stable in formulations with pH 5.0-8.0 for 12 months.

## 4. Application Fields & Dosage Guide

### 4.1 Main Application Fields

- Food Industry:** Flavor/fragrance for candy, bakery, beverage, ice cream, chocolate, chewing gum and spice; core raw material for aniseed, sweet and floral flavor formulation; flavor enhancer for baked food and dairy products.
- Fragrance & Cosmetic Industry:** Perfume raw material for perfume, eau de toilette, cologne; fragrance for skin care creams, lotions, shampoos, conditioners and body washes; fragrance fixative for high-end cosmetic and perfume formulations.

### 4.2 Recommended Dosage (w/w in formulation, adjust by fragrance/effect intensity)

Application Field	Dosage (Industrial Grade)	Dosage (Food/Fragrance/Cosmetic/Pharm Grade)	Remarks
Food - Candy/Bakery/Beverage	0.03-0.4%	0.01-0.2%	Avoid high-temperature ( $>200^{\circ}\text{C}$ ) processing; add at low temperature
Fragrance - Perfume/Eau de Toilette	1-7%	0.5-5%	Main/auxiliary fragrance/fixative; mix with fragrance oil system
Cosmetic - Skin Care/Hair Care	0.02-0.3%	0.01-0.15%	Aromatic phase, mix with vegetable oil/propylene glycol
Pharmaceutical - Intermediate Synthesis	8-99%	40-99%	Depending on reaction type; inert gas protection optional
Pharmaceutical - Oral Drug Flavoring	0.004-0.04%	0.002-0.02%	Mask drug odor; food/pharm grade only
Daily Chemicals - Detergent/Air Freshener	0.02-0.2%	0.01-0.1%	Mix with surfactant system; fragrance fixative added
Candles/Incense	0.3-2%	0.2-1.5%	Melt and mix with wax base at low temperature ( $<80^{\circ}\text{C}$ )

## 5. Usage & Formulation Guidelines

- Food Formulation (Aniseed Flavored Cookie):** Melt butter and sugar at  $60-70^{\circ}\text{C}$ ; cool to room temperature; add Anisyl Acetate (0.01-0.2%) and other raw materials; knead dough and bake at  $150-160^{\circ}\text{C}$ ; avoid adding at high temperature to prevent fragrance loss.

## 6. Packaging & Storage

- 500mL/1L Amber glass bottle:** Food/Fragrance/Cosmetic/Pharm lab/R&D/small-batch use, sealed with anti-static screw cap + plastic plug
- 5L/10L HDPE plastic drum:** Cosmetic/Industrial medium-batch use, inner anti-static lining + double anti-leakage cap
- 25L HDPE plastic drum/amber glass drum:** Food/Pharm/Bulk industrial use, anti-static + nitrogen-filled packaging (for long-term storage)

## 7. Safety & Protection

- The product is a **Class 3 flammable liquid** with mild skin/eye irritation; all operations must be conducted by trained professional personnel with specified PPE (chemical-resistant goggles, nitrile rubber gloves, chemical-resistant apron, organic vapor respirator).