

## Technical Data Sheet (TDS)

### - $\alpha$ -Iso-Methylionone

**Revision Date:** 15 FEB 2026 **CAS Number:** 127-51-5 **Formula:** C<sub>14</sub>H<sub>22</sub>O **Molecular Weight:** 206.32 g/mol

#### 1. Product Overview

$\alpha$ -Iso-Methylionone is a high-purity synthetic fragrance raw material with a characteristic **floral, musky and woody odor**, widely used in the fragrance, flavor and cosmetic industries. It features stable chemical properties, long-lasting scent retention and excellent compatibility with other fragrance ingredients, making it a key intermediate for formulating floral, fruity and woody fragrance profiles. The product meets international fragrance industry standards (IFRA) and is suitable for cosmetic, personal care and household cleaning product formulations.

**Core Characteristics:** High purity; stable under normal use; long-lasting fragrance; excellent compatibility; low toxicity (for intended use).

#### 2. Technical Specifications (Complies with IFRA/Industrial Standards)

Item	Specification	Test Method
Appearance	Colorless to pale yellow clear liquid	Visual Inspection
Assay (Purity)	≥ 98.0% (w/w)	Gas Chromatography (GC)
Odor	Characteristic floral-musky-woody odor	Sensory Evaluation (IFRA Method)
Relative Density (20/20°C)	0.920-0.928 g/cm <sup>3</sup>	Hydrometer Method
Refractive Index (20°C)	1.490-1.498	Abbe Refractometer
Boiling Point	270-275°C	Distillation Method
Flash Point (Closed Cup)	≥ 110°C	Pensky-Martens Method
Melting Point	-60 to -55°C	DSC
Water Content	≤ 0.5% (w/w)	Karl Fischer Titration
Heavy Metals (Pb)	≤ 10 ppm	Atomic Absorption Spectrometry (AAS)
Residue on Evaporation	≤ 0.1% (w/w)	Gravimetric Method
Viscosity (25°C)	5-8 mPa·s	Rotational Viscometer
Solubility	Miscible with ethanol, ether, acetone, vegetable oils; insoluble in water	Shake Flask Method

#### 3. Product Advantages

- High Purity & Consistency:** Assay ≥ 98.0%, low impurity content, consistent odor and physical properties across batches.
- Versatile Fragrance Profile:** Blends well with floral (rose, jasmine), fruity (peach, berry) and woody (sandalwood, cedar) fragrances; enhances scent depth and longevity.
- Stable Chemical Properties:** Resistant to hydrolysis (pH 4-8); stable at room temperature; no significant degradation in cosmetic/personal care formulations (shelf life compatible).
- Compliant with International Standards:** Meets IFRA, FDA and EU REACH regulations; suitable for global market applications.
- Low Dosage Requirement:** Effective fragrance concentration at 0.1-5.0% (w/w) in formulations; cost-efficient for large-scale production.

#### 4. Application Fields

##### 4.1 Fragrance & Flavor Industry

- Fine fragrances (perfumes, eau de toilette, cologne);
- Functional fragrances (air fresheners, candle wax, incense).

##### 4.2 Cosmetic & Personal Care Products

- Skin care (creams, lotions, serums);



# 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>

- Hair care (shampoos, conditioners, hair sprays);
- Body care (body wash, lotion, deodorants);
- Makeup (foundation, lipstick, nail polish).

### 4.3 Household & Industrial Products

- Household cleaning (dish soap, laundry detergent, surface cleaner);
- Fabric care (fabric softener, laundry fragrance beads);
- Automotive care (car air fresheners, interior cleaners).

### 4.4 Fine Chemical Synthesis

- Intermediate for the synthesis of other fragrance and flavor compounds;
- Raw material for specialty organic chemical production.

## 5. Usage Methods & Dosage

### 5.1 General Dosage (Adjust based on formulation type and fragrance intensity)

Application Field	Recommended Dosage (w/w)
Fine Fragrances (Perfume/EDT)	1.0-5.0%
Cosmetics (Skin/Hair Care)	0.1-1.0%
Household Cleaning Products	0.05-0.5%
Fabric Care Products	0.1-0.3%
Fragrance Intermediates	5.0-20.0% (synthesis)

### 5.2 Formulation Notes

- Mix with other fragrance ingredients **at room temperature**; avoid heating above 60°C (may cause slight odor degradation).
- Compatible with most cosmetic bases (water-based, oil-based, emulsion); insoluble in water – use solubilizers (e.g., polysorbate 20/80) for water-based formulations.
- Add at the **final stage** of formulation (after cooling) to minimize fragrance loss.
- For best results, store formulated products in cool, dark conditions (same as raw material).

## 6. Packaging & Storage

### 6.1 Packaging Specifications

- 1 L / 5 L Sealed glass bottles (laboratory/small-scale use);
- 25 L HDPE plastic drums (industrial use);
- 200 L stainless steel drums (bulk use);
- Custom packaging (100 mL-1000 L) available upon request.

### 6.2 Storage Conditions

- **Temperature:** 5-30°C; store in a cool, dry, well-ventilated warehouse; avoid extreme heat/cold and direct sunlight/UV light.
- **Container:** Keep tightly sealed in original glass/HDPE/stainless steel containers; prevent contact with air and moisture.
- **Separation:** Store separately from strong oxidizers, acids, bases, food and food additives.
- **Shelf Life:** 24 months (unopened, under specified storage conditions); 6 months after opening (if sealed properly).

### 6.3 Transportation

- Classified as **UN 3082, Class 9, PG III** (environmentally hazardous liquid);
- Transport by licensed hazardous chemical carriers; avoid direct sunlight, heat and collision during transport;
- Comply with national/international transport regulations (ADR/RID, IMDG, IATA-DGR).

## 7. Safety & Handling

- The product is a mild skin/eye irritant; avoid direct contact with skin, eyes and respiratory tract.
- Wear nitrile rubber gloves, chemical safety goggles and a lab coat during handling; use a fume hood for large-scale operations.
- In case of skin/eye contact, rinse thoroughly with water and seek medical advice if irritation persists.
- Do not eat, drink or smoke while handling; wash hands and face thoroughly after use.
- Keep out of reach of children and unauthorized personnel.