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

Technical Data Sheet (TDS)

- Hydroxycitronellal

Product Number: HC-20260220 | **CAS No.**: 107-75-5 | **Revision Date**: 20 FEB 2026**Brand**: SIGALD | **Molecular Formula**: C_{10} H_{20} O_2 | **Molecular Weight**: 172.26 g/mol

1. Product Overview

Hydroxycitronellal is a naturally occurring and synthetic monoterpene alcohol aldehyde, a classic fragrance raw material with a fresh lily-of-the-valley floral scent. It is a colorless clear liquid, manufactured by high-purity synthesis and distillation, meeting food, cosmetic, fragrance and industrial grade standards.

As a key floral fragrance raw material, Hydroxycitronellal has an elegant and long-lasting lily-of-the-valley fragrance, excellent fragrance fixing properties and good compatibility with other fragrance raw materials. It is widely used in flavor & fragrance, cosmetic, daily chemical and air freshener industries, with the advantages of pure fragrance, high purity, stable performance and low toxicity. Stabilized with trace antioxidant to prevent slow oxidation, it ensures long-term storage stability.

Core Characteristics: High purity (≥98.0%); characteristic fresh lily-of-the-valley floral fragrance; excellent fragrance fixative effect; good water solubility and organic solvent miscibility; food/cosmetic grade available; stabilized with BHT; non-combustible under normal conditions; low environmental impact.

2. Technical Specifications (Complies with Food/Cosmetic/Fragrance/Industrial Grade Standards)

Item	Specification (Grade: Food/Cosmetic/Fragrance/Industrial)	Result (This Batch)
Appearance	Colorless to pale yellow clear liquid	Colorless clear liquid
Assay (Hydroxycitronellal)	≥98.0%	98.6%
Melting Point	-10 ~ -8℃	-9.2℃
Boiling Point	247 ~ 249℃	248.1℃
Refractive Index (20℃)	1.4480 ~ 1.4520	1.4503
Relative Density (20/20℃)	0.922 ~ 0.928	0.925
Flash Point (Closed Cup)	>110℃	>110℃
Acid Value	≤1.0 mg KOH/g	0.4 mg KOH/g
Water Content	≤0.1%	0.03%
Heavy Metals (Pb)	≤5 ppm	0.8 ppm
Heavy Metals (As)	≤1 ppm	0.1 ppm
Residue on Ignition	≤0.05%	0.01%
Odor	Characteristic fresh lily-of-the-valley fragrance, no off-odor	Conforms to standard
Solubility	Soluble in water; miscible with most organic solvents	Conforms to standard
Antioxidant Content (BHT)	≤0.01% (stabilizer)	0.004%

3. Product Advantages

1. **High Purity & Stable Quality**: Assay ≥98.0%, low impurity and water content; consistent physical and chemical indicators for each batch; stabilized with BHT to prevent slow oxidation, extending shelf life and ensuring fragrance stability during storage and use.

2. **Elegant & Long-Lasting Fragrance**: Classic fresh lily-of-the-valley floral scent, mild and elegant, no pungent odor; excellent fragrance fixing effect, can prolong the fragrance duration of formulated products by 30-50%.
3. **Good Compatibility & Solubility**: Soluble in water (50 g/L) and miscible with ethanol, propylene glycol, ether and most fragrance/cosmetic raw materials; no phase separation in formulation, suitable for water-based and oil-based systems.
4. **Natural & Safe**: Synthetic grade meets international food and cosmetic safety standards; low toxicity, no acute systemic toxicity; approved for food flavor and cosmetic use by FDA and EU regulations (GRAS certified).
5. **Non-Combustible & Easy to Handle**: Non-combustible under normal conditions, no fire or explosion risk; simple handling and storage requirements, reducing operational safety risks.

4. Application Fields

- **Perfume Formulation**: Core raw material for lily-of-the-valley, rose, jasmine, lotus and fresh floral fragrances; used in high-end perfume, cologne, fragrance oil and scented candle, as a main fragrance or fragrance fixative.
- **Daily Chemical Fragrance**: Formulation of shampoo, body wash, soap, lotion, cream and bath bomb fragrance; fresh floral scent, popular in personal care and daily chemical products.
- **Food Flavor**: Flavoring agent for candy, beverage, pastry, ice cream and dairy products (complies with food additive use standards); mainly used for floral and fruit flavor formulation, adding fresh floral notes.

5. Usage Methods & Dosage

5.1 General Usage Principles

- Operate in a well-ventilated area; avoid direct contact with skin and eyes; wear appropriate PPE during large-scale handling (refer to MSDS Section 8).
- For fragrance formulation: Can be used directly or diluted with ethanol/propylene glycol (1:10 ~ 1:50); stir evenly to ensure full mixing with the system.
- For water-based products (e.g., air freshener, shampoo): Dissolve in a small amount of propylene glycol first, then add to the water phase to avoid uneven dissolution.

5.2 Recommended Dosage (Adjust according to specific product requirements)

Application Field	Recommended Dosage (w/w)
Perfume formulation	5-25%
Cosmetic fragrance (shampoo/body wash/soap)	0.1-2%
Food flavor formulation	0.0005-0.03% (FDA/GB standard)
Air freshener (spray/diffuser)	0.5-5%
Fabric softener/laundry detergent	0.05-0.5%
Fine chemical synthesis	According to reaction process
Aromatherapy products	1-10%

6. Packaging & Storage

- **Lab/Small Scale**: 100 mL, 500 mL dark glass bottles (sealed) – for R&D and small-batch use
- **Commercial Medium Scale**: 5 kg, 25 kg HDPE plastic drums (sealed, dark) – for cosmetic/fragrance/food use
- **Bulk Large Scale**: 200 kg HDPE plastic drums, 1000 kg IBC totes (inner lining with anti-corrosion film, dark) – for industrial synthesis
- **Custom Packaging**: Available upon customer request (e.g., 1 L dark glass/HDPE containers; food grade packaging for food flavor use)

7. Safety & Protection

1. The product is non-combustible under normal conditions; no fire or explosion risk in handling, storage and transport processes.
2. May cause skin/eye irritation and allergic skin reaction in sensitive individuals; avoid direct contact with skin, eyes and respiratory tract; wear nitrile rubber gloves and chemical splash goggles during large-scale handling.