

TECHNICAL DATA SHEET

CIS-3-HEXENOL

Synthetic green-herbal aroma chemical with a freshly cut grass and green-leaf character

1. RAW MATERIAL IDENTIFICATION

Product name	Cis-3-Hexenol
Chemical name	cis-3-Hexen-1-ol
Synonyms	Leaf Alcohol; (Z)-3-Hexen-1-ol; cis-Hex-3-en-1-ol; Blätteralkohol
INCI name	3-HEXENOL
CAS number	928-96-1
EC number	213-192-8
FEMA number	2563
JECFA number	315
FLAVIS number	02.056
IUPAC name	(3Z)-Hex-3-en-1-ol
Molecular formula	$C_6H_{12}O$
Molecular weight	100.16 g/mol
Chemical group	Unsaturated aliphatic alcohol
Raw material origin	Synthetic
Country of origin	China
Raw material category	Synthetic aroma chemical

Cis-3-Hexenol occurs naturally in numerous plants, while the commercial grade described in this document is of synthetic origin.

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2. OLFACTORY CLASSIFICATION AND ODOUR PROFILE

Fragrance note	Top note
Primary olfactory family	Green
Secondary olfactory family	Herbal - Agrestic - Mint
Odour profile	Intense, fresh, green, grassy and herbal, with nuances of freshly cut grass, crushed leaves and unripe fruit
Application	Fragrance compositions, cosmetic products and flavours

3. DESCRIPTION AND FUNCTION IN FRAGRANCE COMPOSITION

Cis-3-Hexenol, also known as Leaf Alcohol, is one of the most recognisable aroma chemicals used to create natural green odour effects. Its scent recalls freshly cut grass, crushed green leaves, plant stems and unripe green fruit.

In concentrated form, it displays a very powerful, penetrating, grassy and slightly sharp character. After dilution, it develops a fresher and more natural profile, with leafy, herbal and subtly fruity nuances reminiscent of green apple, pear and unripe banana.

It gives a fragrance immediate freshness, naturalness and a realistic vegetative character. In floral and fruity compositions, it reduces excessive sweetness. Owing to its high olfactory strength, it must be dosed carefully, as excessive levels may produce a sharp, bitter, raw or overly grassy effect.

4. APPLICATION AND OLFACTORY COMPATIBILITY

Cis-3-Hexenol is used to create and modify:

- green, leafy and grassy accords;
- freshly cut grass notes;
- violet, muguet, narcissus, hyacinth and jasmine accords;
- rose accords with a natural green character;
- green citrus compositions;
- green apple, pear, grape and unripe banana accords;
- tea, herbal and aromatic compositions;
- fougère and chypre fragrances;
- garden, forest and vegetative accords;
- fragrances for soaps, cosmetics and hygiene products.

It combines well with cis-3-hexenyl acetate, cis-3-hexenyl salicylate, cis-3-hexenyl benzoate, linalool, phenethyl alcohol, hydroxycitronellal, ionones, galbanum, citrus oils, jasmine materials and musky aroma chemicals.

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5. RECOMMENDED USE

Typical use level	Approximately 0.01–1.00% in the fragrance concentrate
Lower levels	Subtle green impact and increased naturalness of the composition
Higher levels	Pronounced green, grassy and vegetative effect, following olfactory and stability testing
Pre-dilution	1% or 10% in ethanol, DPG or another suitable perfumery solvent

The stated range is a formulation guideline, not a regulatory maximum concentration. The final use level must be determined according to the current IFRA Standards, SDS, product category and safety assessment of the finished formulation.

6. PHYSICOCHEMICAL AND TECHNICAL DATA

Appearance	Clear, mobile liquid
Colour	Colourless
Relative density at 25 °C	0.846–0.850
Refractive index at 20 °C	1.438–1.442
Melting point	Approximately –61 °C
Boiling point	Approximately 156–157 °C
Flash point	44 °C
Purity	98.0–100.0%
Solubility	Slightly soluble in water; soluble in ethanol, propylene glycol, DPG, fixed oils and common perfumery solvents
Volatility	Relatively high; develops rapidly in the top part of the fragrance composition
Storage	At temperatures up to 25 °C, in the original, well-filled and hermetically sealed container, protected from air, light and heat sources
Shelf life	24 months
Conditions of shelf-life validity	Storage in the original container under the recommended conditions

The stated physicochemical values represent the specification of the described commercial grade. Exact batch parameters must be confirmed using the manufacturer's applicable TDS and COA.

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7. STABILITY AND FORMULATION COMPATIBILITY

The material is stable when stored correctly but is sensitive to prolonged exposure to air, light and elevated temperature. Close the container immediately after use. Stability, colour, odour profile and compatibility must be confirmed in the intended finished formulation and packaging.

8. REGULATORY DATA AND STATUS

Vegan status: Vegan; contains no ingredients of animal origin.

GMO status: Not derived from GMOs and contains no GMOs.

Nanomaterials: Contains no nanomaterials according to the relevant regulatory definitions.

IFRA status: The final concentration in the finished product must comply with the current IFRA Standards, the product safety assessment and the regulations of the target market.

9. SAFETY INFORMATION

Cis-3-Hexenol is intended for professional use as an ingredient in fragrance, cosmetic and flavour compositions. It must not be applied directly to the skin in concentrated form.

H226	Flammable liquid and vapour
H319	Causes serious eye irritation

Wear suitable protective gloves and eye protection. Ensure good ventilation. Avoid contact with skin and eyes and avoid inhalation of vapours. Keep away from heat, sparks, open flames and other ignition sources. Verify the exact classification in the current SDS for the specific product.

10. DISCLAIMER

The information applies solely to the described raw material and does not replace the specification, COA, IFRA documentation or SDS issued by the specific manufacturer. The user is responsible for verifying identity, origin, purity, suitability, stability, safety and regulatory compliance in the intended application and target market. This document does not constitute regulatory approval or a guarantee of finished-product properties.