

TECHNICAL DATA SHEET

C11 UNDECYLENIC ALDEHYDE

Undec-10-enal · synthetic green-aldehydic aroma chemical

1. PRODUCT IDENTIFICATION

Product name	C11 Undecylenic Aldehyde
Chemical name	Undec-10-enal
INCI name	Undecylenal
CAS number	112-45-8
Molecular formula	C ₁₁ H ₂₀ O
Molecular weight	168.28 g/mol
Raw material type	Synthetic unsaturated aliphatic aldehyde
Olfactory family	Aldehydic, green
Position in perfume	Top note
Geographical origin	India

2. OLFACTORY CLASSIFICATION AND ODOUR PROFILE

C11 Undecylenic Aldehyde is a synthetic aroma chemical from the family of unsaturated aliphatic aldehydes. It has a pronounced green-aldehydic character, with notes reminiscent of freshly cut grass, mild citrus-lemon freshness and a clean, bright aldehydic effect. The technical documentation additionally describes its odour as citrus, fresh, floral and ozonic.

3. FUNCTION IN A FRAGRANCE COMPOSITION

It functions primarily as a top note. Owing to its high volatility, it develops rapidly after application and contributes initial freshness, diffusion and aldehydic brightness. Its green component is particularly useful when a natural, fresh and mildly grassy opening is required.

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4. APPLICATION AND COMPATIBILITY

The material is particularly suitable for floral-green compositions, where it supports the freshness of floral notes and gives them a cleaner, livelier structure. It is also used in modern chypre accords, aldehydic compositions, citrus formulas and fragrances with an ozonic or green character.

It blends well with other aliphatic aldehydes, bergamot, lemon, petitgrain and other citrus notes. In green accords, it can be combined with galbanum, cis-3-hexenol and related green materials. In floral compositions, it supports jasmine, rose, lily of the valley and other fresh floral notes.

5. RECOMMENDED USE

It is used to construct green and aldehydic top notes and to increase the freshness and diffusion of floral, citrus, ozonic and chypre compositions.

Owing to its high olfactory intensity, it should be used in small, precisely controlled quantities. The technical data provided do not specify an exact recommended concentration range. Excessive dosage may dominate the top of the fragrance and suppress more delicate floral or citrus nuances.

6. PHYSICOCHEMICAL DATA

Appearance	Liquid
Colour	Colourless
Odour	Citrus, fresh, floral and ozonic
Relative density at 25 °C	0.840-0.846
Refractive index at 20 °C	1.441-1.446
Flash point	72 °C, closed cup
Purity	97-100%
Antioxidant	0.05% α -tocopherol
Solubility	Not specified in the technical data provided

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7. STABILITY

Keep the product in its original, tightly closed container, protected from prolonged exposure to light, heat and air. Compatibility, stability, colour and odour should be evaluated in the intended finished formulation and packaging.

8. REGULATORY AND STATUS INFORMATION

IFRA status: Use in the finished formulation must comply with the current IFRA certificate and any restrictions applicable to the relevant product category.

Vegan status: Vegan; does not contain ingredients of animal origin.

GMO status: Not derived from GMOs and does not contain GMOs. Nanomaterials: Does not contain nanomaterials according to the relevant regulatory definitions.

9. STORAGE AND SHELF LIFE

Store in the original, tightly closed container, protected from light, heat and air, at 2-8 °C. Shelf life is 24 months under the specified storage conditions.

10. SAFETY INFORMATION

The product is intended for industrial use in perfumes, cosmetic products and flavours. Avoid direct contact with the undiluted product. Refer to the current Safety Data Sheet (SDS) for hazard classification, safe handling, first-aid measures and disposal instructions.

11. DISCLAIMER

The information in this technical data sheet relates to the material described and is based on the technical data provided. The user is responsible for verifying suitability, stability, safety and regulatory compliance in the intended formulation and application. This document does not guarantee the properties of the finished product.