

## TECHNICAL DATA SHEET

# C12 LAURIC ALDEHYDE

Dodecanal · synthetic aldehydic aroma chemical

### 1. PRODUCT IDENTIFICATION

|                     |                                   |
|---------------------|-----------------------------------|
| Product name        | C12 Lauric Aldehyde               |
| Chemical name       | Dodecanal                         |
| INCI name           | Lauraldehyde                      |
| CAS number          | 112-54-9                          |
| Molecular formula   | C <sub>12</sub> H <sub>24</sub> O |
| Molecular weight    | 184.32 g/mol                      |
| Raw material type   | Synthetic aliphatic aldehyde      |
| Olfactory family    | Aldehydic                         |
| Position in perfume | Top note                          |
| Geographical origin | India                             |

### 2. OLFACTORY CLASSIFICATION AND ODOUR PROFILE

C12 Lauric Aldehyde is a synthetic aroma chemical from the aliphatic aldehyde family, chemically defined as dodecanal. It has a strong, clean and distinctly aldehydic odour profile combining soapy, fatty-green and mildly waxy nuances. Its odour evokes clean laundry and soapy citrus tones characteristic of long-chain C12 aldehydes.

### 3. FUNCTION IN A FRAGRANCE COMPOSITION

It functions primarily as a top note, contributing brightness, diffusion and characteristic aldehydic freshness to the opening of a fragrance. Its effect is not conventionally citrus; instead, it conveys citrus freshness through a clean, soapy and mildly waxy aldehydic character.

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### 4. APPLICATION AND COMPATIBILITY

C12 Lauric Aldehyde is an important material in classical floral-aldehydic compositions, where it is used to build a recognisable, bright and elegant aldehydic opening. It is particularly suitable for chypre and fougère structures and for complex aldehydic accords containing aldehydes with different carbon-chain lengths.

It blends well with bergamot, lemon and other citrus materials, as well as rose, jasmine, lily of the valley, neroli and other bright floral notes. In chypre compositions, it supports the relationship between a fresh aldehydic opening and deeper woody, mossy or amber components. In fougère formulations, it combines well with lavender, aromatic and green notes.

### 5. RECOMMENDED USE

It is used to create clean, bright and distinctly aldehydic top notes, primarily in floral-aldehydic, chypre and fougère compositions.

Owing to its high olfactory strength, it requires precise dosing at very low levels. The technical data provided do not specify an exact recommended concentration range. Excessive dosage may produce a harsh, fatty or distinctly waxy-aldehydic effect and suppress more delicate components of the fragrance formula.

### 6. PHYSICOCHEMICAL DATA

|                           |                                                            |
|---------------------------|------------------------------------------------------------|
| Appearance                | Liquid                                                     |
| Colour                    | Colourless                                                 |
| Odour                     | Fatty, aldehydic and green                                 |
| Density at 20 °C          | 0.824-0.840                                                |
| Refractive index at 20 °C | 1.432-1.440                                                |
| Flash point               | >100 °C, closed cup                                        |
| Purity                    | 97-100%                                                    |
| Solvents                  | Solvent-free                                               |
| Residual solvents         | Not present                                                |
| Antioxidants              | Maximum 0.05% $\alpha$ -tocopherol and 0.1% benzoguanamine |
| Solubility                | Not specified in the technical data provided               |

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### 7. STABILITY

The product is stable when stored correctly in its original, tightly closed container and protected from prolonged exposure to light, heat and air. Stability, compatibility, 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; no animal-derived materials are used in the manufacturing process. GMO status: Not derived from GMOs and does not contain GMOs.

Nanomaterials: Does not contain nanomaterials according to the relevant regulatory definition. Animal testing: The product has not been tested on animals.

Halal status: Compliant with Halal requirements. Kosher status: Compliant with Kosher requirements.

Palm oil: Certain production batches may be manufactured from palm oil or its derivatives.

### 9. STORAGE AND SHELF LIFE

Store in the original, tightly closed container, protected from prolonged exposure to light, heat and air, at a temperature not exceeding 25 °C. Shelf life is 24 months under the specified storage conditions.

### 10. SAFETY INFORMATION

The product is intended for industrial use in perfume and cosmetic products. 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.