

TECHNICAL DATA SHEET

EUGENOL NATURAL

Natural plant-derived phenolic aroma chemical with a warm clove character

1. RAW MATERIAL IDENTIFICATION

Product name	Eugenol Natural
INCI name	EUGENOL
IUPAC name	2-Methoxy-4-(prop-2-en-1-yl)phenol
CAS number	97-53-0
Molecular formula	C ₁₀ H ₁₂ O ₂
Molecular weight	164.20 g/mol
Chemical group	Phenolic aroma chemical / allyl-substituted guaiacol derivative
Raw material origin	Natural; 100% plant-derived
Country of origin	Indonesia
ISO 16128 status	Natural Index = 1; Natural Origin Index = 1
Raw material category	Natural aroma chemical

2. OLFACTORY CLASSIFICATION AND ODOUR PROFILE

Eugenol Natural belongs to the spicy and floral olfactory families and functions primarily as a base note in fragrance compositions.

Its profile is warm, powerful and intensely spicy, with a dominant clove character, subtle floral sweetness and a mild phenolic nuance that provides distinctive depth and persistence.



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3. DESCRIPTION AND FUNCTION IN FRAGRANCE COMPOSITIONS

Eugenol Natural is a natural, plant-derived aroma chemical with a characteristic warm and intense clove odour. Its profile is predominantly spicy, with gentle floral sweetness and a subtle phenolic nuance that gives the material depth and persistence.

In fragrance compositions, Eugenol acts primarily as a base note. Its relatively high substantivity allows it to remain present throughout fragrance development and to add warmth, fullness and spicy depth.

It is particularly important in the reconstruction of clove and other warm spice accords. In floral compositions, it performs especially well with rose, ylang-ylang, jasmine and geranium, adding a warmer, spicy and mildly phenolic dimension.

In classical rose-spice structures, Eugenol connects floral notes with warm base materials. It combines with cinnamon, isoeugenol, vanilla, tonka and benzoin in amber and oriental compositions, while patchouli, vetiver, sandalwood and other woody materials emphasise its deeper and drier spicy facets.

Functional role in perfumery: Natural spicy base note, key component of clove accords and modifier that adds warmth, depth, persistence and a subtle phenolic dimension to floral, amber and oriental compositions.

4. APPLICATION AND OLFACTORY COMPATIBILITY

Recommended use in perfumery: As a natural spicy base component in clove, floral-spicy, amber, chypre and oriental compositions.

It is used to create and modify:

- clove and warm spice accords;
- rose-spice and carnation-style compositions;
- floral compositions with ylang-ylang, jasmine and geranium;
- amber and oriental fragrances;
- chypre structures;
- vanilla, tonka and balsamic bases;
- woody-spicy compositions;
- fragrance and flavour formulations, subject to the applicable regulatory requirements.

It combines particularly well with other spicy materials, rose, ylang-ylang, jasmine, geranium, cinnamon, isoeugenol, vanilla, tonka, benzoin, patchouli, vetiver, sandalwood and warm woody materials.



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5. RECOMMENDED USE

Recommended application	Clove, floral-spicy, amber, chypre and oriental compositions
Typical concentration	Not stated in the supplied Description or TDS
Function	Natural spicy base note and modifier of floral, amber and woody structures
IFRA status	Restricted according to the applicable IFRA Standard; check the current certificate for the relevant finished-product category

Because of its high olfactory strength, persistence and pronounced clove-phenolic character, careful and gradual dosing is recommended. Higher levels may easily dominate the composition, while controlled amounts provide natural warmth and spicy depth without disturbing the balance of the fragrance.

6. PHYSICOCHEMICAL AND TECHNICAL DATA

Appearance	Liquid
Colour	Colourless to pale yellow
Odour	Spicy and floral
Olfactory character	Warm, powerful and persistent spicy profile with dominant clove, subtle floral sweetness and a mild phenolic character
Density at 20 °C	1.055-1.075
Refractive index at 20 °C	1.540-1.542
Flash point	>93 °C
Purity	99.0-100.0%
Solubility	Not stated in the supplied TDS



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7. STABILITY AND COMPATIBILITY

Stable under the recommended storage conditions when protected from air and light. It shows good compatibility with spicy materials, rose, ylang-ylang, jasmine, geranium, cinnamon, vanilla, tonka, benzoin, patchouli and warm woody materials. Compatibility, stability, colour and odour profile should be confirmed in the intended finished formulation and packaging.

8. REGULATORY INFORMATION AND STATUS

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

GMO status: Does not contain GMOs and is not derived from genetically modified organisms.

ISO 16128 status: Natural Index = 1; Natural Origin Index = 1.

Halal and kosher status: Halal and kosher compatible.

IFRA status: Eugenol is subject to category-dependent IFRA restrictions. Check the current IFRA certificate and apply the maximum permitted concentration for the relevant finished-product category.

Safety status: Identified as a hazardous chemical in the supplied TDS; apply the handling measures specified in the current Safety Data Sheet.

Nanomaterials: Not stated in the supplied data.

9. STORAGE AND SHELF LIFE

Store in the original, well-filled and hermetically sealed container, protected from air and light. Close the container immediately after use.

Recommended storage temperature: Maximum 25 °C.

Shelf life: 24 months under the recommended storage conditions.

10. SAFETY INFORMATION

Eugenol Natural is intended for professional use as an ingredient in fragrance, cosmetic and flavour compositions. It should not be applied directly to the skin in concentrated form.

Use suitable protective gloves and eye protection. Avoid direct contact with the skin and eyes and inhalation of vapour or aerosol. Follow the current Safety Data Sheet and account for the applicable IFRA restrictions and fragrance-allergen declaration requirements in the finished product.

11. DISCLAIMER

The information applies exclusively to the described raw material and does not replace the specification, Certificate of Analysis, IFRA documentation or Safety Data Sheet of the specific manufacturer. The user is responsible for verifying suitability, stability, safety and regulatory compliance in the intended application and target market. This document does not constitute regulatory approval or a guarantee of the properties of the finished product.