

TECHNICAL DATA SHEET

ISOEUGENOL

Naturally derived phenolic aroma chemical with a warm clove-floral character

1. RAW MATERIAL IDENTIFICATION

Product name	Isoeugenol
Chemical name	2-Methoxy-4-(1-propenyl)phenol
INCI name	ISOEUGENOL
CAS number	97-54-1
EC / EINECS number	202-590-7
Molecular formula	C ₁₀ H ₁₂ O ₂
Molecular weight	164.20 g/mol
Chemical group	Phenolic aroma chemical / phenylpropanoid derivative
Raw material type	Naturally derived aroma chemical
Raw material origin	Plant origin; naturally derived according to ISO 16128
Geographical origin	Indonesia
Raw material category	Aroma chemical of natural origin
ISO 16128	Natural Index = 0; Natural Origin Index = 1

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2. OLFACTORY CLASSIFICATION AND ODOUR PROFILE

Olfactory family: Spicy / Floral / Woody.

Position in perfume: Middle to base note.

Odour profile: Warm, sweet and spicy, with characteristic clove and carnation notes, gentle floral softness and a warm woody-spicy background.

Olfactory character: Warm and rounded, with a pronounced clove tone, mild sweetness and a subtle floral component.

3. DESCRIPTION AND FUNCTION IN FRAGRANCE COMPOSITIONS

Isoeugenol is an aroma chemical with a characteristic warm, spicy and floral odour profile. The dominant clove note is accompanied by a softer carnation facet and a warm woody-spicy background. The supplied TDS describes its odour as spicy, sweet and floral.

Compared with Eugenol, Isoeugenol is generally softer, less sharp and more rounded, with a more pronounced floral component. It is therefore particularly suitable for compositions requiring a clove character without excessive phenolic dominance.

In fragrance compositions, it functions primarily as a middle-to-base note. Its persistence allows it to connect the floral heart with warmer spicy and woody parts of the base, making it an important component of clove accords and floral-spicy structures.

It is especially useful in clove reconstructions and in floral-oriental, amber and woody-spicy compositions. With vanillin, benzoin and other balsamic materials, it produces softer and fuller oriental accords, while sandalwood and amber materials enhance warmth and depth.

Functional role in perfumery: Warm clove-floral middle-to-base note, modifier of carnation and floral-spicy accords, and linking component between floral, balsamic, amber and woody materials.

4. APPLICATION AND OLFACTORY COMPATIBILITY

Recommended for the creation and modification of:

- clove and carnation accords;
- floral-spicy compositions;
- floral-oriental structures;
- amber accords;
- woody-spicy compositions;
- rose, jasmine and ylang-ylang accords;
- fragrance compositions for perfumes, cosmetics and flavour applications, subject to applicable requirements.

It combines well with Eugenol, Methyl Diantilis, cinnamon materials, vanillin, benzoin, rose, jasmine, ylang-ylang, sandalwood and amber components.

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5. RECOMMENDED USE

Recommended application	Clove, floral-spicy, floral-oriental, amber and woody compositions
Typical concentration	No specific recommended dosage range is stated in the supplied TDS
Dosage guidance	Dose carefully and progressively because of the pronounced odour and sensitising potential
IFRA status	Restricted; check the current IFRA certificate and the maximum permitted concentration for the relevant finished-product category

The final concentration must be determined according to the intended olfactory effect, the current IFRA certificate, the supplier documentation and the safety assessment of the finished formulation. Formulation guidance does not represent a regulatory maximum.

6. PHYSICOCHEMICAL AND TECHNICAL DATA

Appearance	Viscous liquid; may crystallise at approximately 12 °C and below
Colour	Colourless to pale yellow
Odour	Spicy, sweet and floral
Density at 20 °C	1.080-1.090
Relative density at 25 °C	1.079-1.085
Refractive index at 20 °C	1.576-1.579
Optical rotation	-5° to +10°
Flash point	142 °C, closed cup
Total cis + trans isomers	>99%
Trans isomer	>92%
Antioxidants	Not directly added
Solubility	Not stated in the supplied TDS

Crystallisation at approximately 12 °C or below is a reversible physical change and does not necessarily indicate deterioration. Homogenise the material after returning it to a suitable handling temperature.



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7. STABILITY AND FORMULATION COMPATIBILITY

Stable under the recommended storage conditions when protected from light and moisture. Stability, colour, odour and compatibility should be confirmed in the intended finished formulation and packaging.

Isoeugenol combines well with Eugenol, Methyl Diantilis, cinnamon materials, vanillin, benzoin, rose, jasmine, ylang-ylang, sandalwood and amber components.

8. REGULATORY INFORMATION AND STATUS

Intended use: Industrial use in perfumes, cosmetics and flavour compositions.

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

GMO status: Does not contain GMOs and is not derived from GMO raw materials.

IFRA status: Use must comply with current IFRA restrictions for the relevant finished-product category.

Allergen status: Isoeugenol is a regulated fragrance allergen. Its concentration in the finished cosmetic product must be calculated and declared when the applicable regulatory conditions are met.

Halal status: Not certified according to the supplied TDS. Kosher status: Compliant with kosher requirements.

Nanomaterials: Does not contain nanomaterials. BSE/TSE status: Free from BSE/TSE risk.

Animal testing: The product has not been tested on animals. Palm oil: Does not contain palm oil, palm kernel oil or their derivatives.

9. STORAGE AND SHELF LIFE

Store in a cool, dry place, in the original tightly closed container and protected from light and moisture.

Storage temperature: No exact maximum storage temperature is stated in the supplied TDS.

Shelf life: 24 months under the recommended storage conditions.

Physical-state note: The product may crystallise at approximately 12 °C and below.

10. SAFETY INFORMATION

Isoeugenol is intended for professional use and should not be applied directly to the skin in concentrated form. Because of its sensitising potential, use suitable protective gloves and eye protection, avoid direct contact with the skin and eyes, and follow the current supplier Safety Data Sheet.

11. DISCLAIMER

The information relates solely to the described raw material and does not replace the manufacturer's specification, certificate of analysis, IFRA documentation or Safety Data Sheet. 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 the properties of the finished product.