



TECHNICAL DATA SHEET

GAIACOL

Synthetic phenolic aroma chemical with an intense smoky and burnt-wood character

1. RAW MATERIAL IDENTIFICATION

Product name	Gaiacol
Chemical name	2-Methoxyphenol
INCI name	GUAIACOL
IUPAC name	2-Methoxyphenol
Synonym	o-Methylcatechol
CAS number	90-05-1
EC / EINECS number	201-964-7
Molecular formula	C ₇ H ₈ O ₂
Molecular weight	124.14 g/mol
Chemical group	Aromatic phenolic compound
Raw material origin	Synthetic
Geographical origin	China
Raw material category	Synthetic aroma chemical
ISO 16128	Natural Index = 0; Natural Origin Index = 0

2. OLFACTORY CLASSIFICATION AND ODOUR PROFILE

Gaiacol belongs to the smoky / woody / phenolic olfactory family and functions primarily as a middle and base note in fragrance compositions.

Its profile is intensely smoky, woody and phenolic, with a characteristic burnt-wood note, dry spicy nuances and a subtle medicinal-animalic undertone.



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3. DESCRIPTION AND FUNCTION IN FRAGRANCE COMPOSITIONS

Gaiacol is a synthetic aroma chemical from the phenolic group, with a distinctly smoky, woody and phenolic character. Although this compound may occur naturally in wood smoke, creosote and certain natural aromatic materials, the raw material described in the supplied TDS is of synthetic origin.

Its odour profile is dominated by burnt wood and smoke, accompanied by dry phenolic sharpness, spicy nuances and a discreet animalic undertone. This combination makes it useful for creating an authentic smoke effect without relying exclusively on natural tarry or pyrolysed materials.

In fragrance compositions, it functions primarily as a middle and base note. Owing to its very powerful character, even small quantities can significantly change the composition and produce a recognisable effect of smoke, charred wood or a dark phenolic accord.

It is particularly suitable for leather, tobacco and dark woody compositions, as well as niche fragrances inspired by campfire smoke, soot or burnt wood. In leather accords it contributes dryness and rugged authenticity, while with vetiver, cedarwood, patchouli and labdanum it deepens the dark woody character.

It blends well with birch tar, cade notes, vetiver, cedarwood, patchouli, labdanum, tobacco and leather materials. In trace amounts, it can also increase the complexity of amber or spicy compositions.

Functional role in perfumery: A powerful smoky-phenolic modifier and structural material for leather, tobacco and dark woody accords. It introduces burnt-wood realism, dryness and depth and must be dosed with high precision.



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4. APPLICATION AND OLFACTORY COMPATIBILITY

Recommended use in perfumery: For creating smoky, leather, tobacco and dark woody accords and for reconstructing the odour of burnt wood, campfire smoke and charred materials.

It is used to create and modify:

- smoky and burnt-wood accords;
- leather and tarry compositions;
- tobacco accords;
- dark woody and resinous bases;
- campfire and charred-wood effects;
- animalic-smoky compositions;
- dark amber and spicy fragrances;
- experimental and niche fragrance structures.

Its phenolic strength requires very careful dosing. Excessive concentration can rapidly shift the profile from pleasantly smoky to strongly medicinal, creosotic or disinfectant-like.

5. RECOMMENDED USE

Recommended use	Small, precisely controlled quantities
Typical concentration	Not specified in the supplied TDS
Primary function	Smoky-phenolic modifier for leather, tobacco and woody accords
IFRA status	Not specified in the supplied TDS

The concentration should be adjusted gradually according to the desired smoky intensity and the structure of the composition. The current IFRA certificate must be checked for the relevant finished-product category before use.

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6. PHYSICOCHEMICAL AND TECHNICAL DATA

Appearance	Liquid; may solidify at lower temperatures
Colour	Colourless to pale yellow
Odour	Smoky, spicy and phenolic
Olfactory character	Intensely smoky and phenolic, with burnt wood, dry spicy and subtle medicinal-animalic nuances
Relative density at 25 °C	1.129-1.140
Refractive index at 20 °C	1.540-1.545
Flash point	82 °C, closed cup
Purity	99-100%
Heavy metals	Arsenic; limit not specified in the supplied TDS
Antioxidants	No added antioxidants
Solubility	Not specified in the supplied TDS

7. STABILITY AND COMPATIBILITY

Stable when properly stored in the original, tightly closed container and protected from light, heat and air. It is compatible with leather, smoky, woody, tobacco, balsamic and animalic 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 GMO raw materials.

IFRA status: Not specified in the supplied TDS; the current IFRA certificate must be checked.

Nanomaterials: Not applicable according to the supplied data.

Halal status: Complies with Halal requirements. Kosher status: Complies with Kosher requirements.

BSE/TSE status: No BSE/TSE risk. Animal testing: The product has not been tested on animals.

9. STORAGE AND SHELF LIFE

Store in the original, tightly closed container, protected from light, heat and air.

Recommended storage temperature: Maximum 25 °C.

Shelf life: 24 months under the prescribed storage conditions.

10. SAFETY INFORMATION

Gaiacol is intended for industrial and professional use in fragrance, cosmetic and flavour compositions. Avoid direct contact with the undiluted product and do not apply it directly to the skin in concentrated form.

Use suitable protective gloves and eye protection. Avoid contact with skin and eyes and inhalation of vapour or aerosol. Work in a well-ventilated area and follow the current Safety Data Sheet for the specific 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.