

TECHNICAL DATA SHEET

L-CARVONE

Synthetic ketonic aroma chemical with a distinctive minty-aromatic character

1. RAW MATERIAL IDENTIFICATION

Product name	L-Carvone
Synonyms	L-Carvone
INCI name	L-CARVONE
CAS number	6485-40-1
Molecular formula	$C_{10}H_{14}O$
Molecular weight	150.22 g/mol
Raw material type	Synthetic ketonic aroma chemical with a distinctive minty-aromatic character
Raw material origin	Synthetic
Raw material category	Synthetic aroma chemical

2. OLFACTORY CLASSIFICATION AND ODOUR PROFILE

L-Carvone belongs primarily to the Herbal - Agrestic - Mint olfactory family, with additional Aromatic and slightly Fruity - Non Citrus facets. It functions as a top-to-middle note and provides a distinctive green-spearmint effect.

Its odour is fresh, minty and aromatic, with a dominant green-spearmint note, a caraway nuance and a discreet camphoraceous-fruity aspect. It is particularly suitable for spearmint reconstructions, aromatic-fruity accords, fougère fragrances and fresh masculine compositions.



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3. DESCRIPTION AND FUNCTION IN FRAGRANCE COMPOSITION

L-Carvone is a synthetic aroma chemical with a recognisable minty-aromatic profile. Its dominant olfactory character resembles fresh green spearmint, accompanied by a caraway nuance and a discreet camphoraceous-fruity tone that adds sharpness and complexity.

Unlike the cold, crystalline effect of menthol, L-Carvone provides a greener, more herbal and more natural mint impression. Its freshness is not exclusively cooling; it also includes aromatic, slightly spicy and fruity nuances characteristic of fresh spearmint leaves.

In a fragrance composition, it acts in the top and middle notes. It provides immediate minty freshness in the opening, while herbal, aromatic and slightly camphoraceous facets develop in the middle phase. This structure enables it to connect volatile citrus notes with the aromatic heart of a fragrance.

L-Carvone is an important material for reconstructing spearmint and other mint accords. It is particularly suitable for fougère compositions, fresh masculine fragrances, aromatic-fruity structures and formulations inspired by herbal and green olfactory profiles.

Its fundamental identity remains minty-aromatic even when used in fruity compositions. Owing to its pronounced and specific character, gradual dosing and evaluation in the finished formulation are recommended.

Functional role in perfumery: L-Carvone acts as a minty-aromatic building material and modifier. It introduces green spearmint freshness, aromatic definition and a slightly camphoraceous accent, while linking citrus top notes with herbal, fougère and woody elements.

4. APPLICATION AND OLFACTORY COMPATIBILITY

Recommended use in fragrances: L-Carvone is used as a key component in spearmint reconstructions and as a minty-aromatic modifier in fougère, citrus, herbal, fruity-aromatic and fresh masculine compositions.

It is used to create and modify:

- spearmint and other mint accords;
- herbal and aromatic compositions;
- mint-citrus accords;
- fougère fragrances;
- fresh masculine fragrances;
- aromatic-fruity structures;
- green and camphoraceous accords;
- fresh functional fragrance compositions.

It combines well with mint materials, menthol, eucalyptol, lavender, rosemary, sage, lemon, bergamot, lime, grapefruit, coumarin and woody materials. In fruity accords it can add a fresh, green and slightly camphoraceous nuance.



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5. RECOMMENDED USE

Recommended use in fragrances	Spearmint reconstructions; fougère, citrus, herbal, fruity-aromatic and fresh masculine compositions
Typical concentrations	Not stated in the supplied Description or TDS
IFRA status	Restricted use according to the 50th Amendment; apply the limits stated in the current IFRA certificate

Careful and gradual dosing is recommended because the pronounced minty and camphoraceous-aromatic character may become dominant. The concentration must be established according to the intended effect and finished-product safety assessment.

6. PHYSICOCHEMICAL AND TECHNICAL DATA

Appearance	Liquid
Colour	Colourless to pale yellow
Odour	Fruity
Olfactory character	Fresh, minty and aromatic, with a characteristic green-spearmint note, a caraway nuance and a discreet camphoraceous-fruity aspect
Relative density at 20/4 °C	0.955-0.965
Refractive index at 20 °C	1.495-1.505
Optical rotation	-60° to -55°
Flash point	98 °C
Purity	97-100%
Solubility	Not stated in the supplied TDS
Shelf life	24 months



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7. STABILITY AND COMPATIBILITY

Stability is maintained under the recommended storage conditions, with protection from air, light and temperature fluctuations. L-Carvone combines well with minty, herbal, aromatic, citrus, spicy and slightly fruity materials. Stability, compatibility, colour and odour profile must be confirmed in the finished formulation and intended packaging.

8. REGULATORY DATA AND STATUS

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

GMO status: Not stated in the supplied TDS.

Halal and Kosher status: Halal and Kosher compatible.

Nanomaterials: Not stated in the supplied TDS.

9. STORAGE AND SHELF LIFE

Store at a constant temperature, preferably at approximately 15 °C, in the original, well-filled and hermetically sealed packaging, protected from air and light. Close the container immediately after use.

Shelf life: 24 months when stored under the recommended conditions.

10. SAFETY INFORMATION

L-Carvone is intended for professional use in fragrances, cosmetic fragrance compositions and flavour compositions. Avoid direct contact with the undiluted material.

Use suitable protective equipment, avoid contact with skin and eyes and ensure adequate ventilation during handling. Consult the current SDS before use.

Its use is subject to IFRA restrictions. The final concentration must comply with the current IFRA certificate, the safety assessment of the finished product and the regulations of the target market.

11. DISCLAIMER

The information applies solely to the described raw material and does not replace the specification, COA, IFRA documentation or SDS issued by 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 finished-product properties.