

TECHNICAL DATA SHEET

AMBRETTOLIDE

Macrocyclic musk aroma chemical with a soft, clean and exceptionally persistent character

1. RAW MATERIAL IDENTIFICATION

Product name	Ambrettolide
INCI name	OXACYCLOHEPTADEC-10-EN-2-ONE
IUPAC name	Oxacycloheptadec-10-en-2-one
Chemical / REACH name	(9Z)-17-Oxacycloheptadec-9-en-1-one
Synonyms	Ambrettolide; 9-Hexadecen-16-olide
CAS number	28645-51-4
EC number	249-120-7
FEMA number	4145
Molecular formula	$C_{16}H_{28}O_2$
Molecular weight	252.40 g/mol
Chemical group	Macrocyclic lactone / macrocyclic musk aroma chemical
Raw material origin	Mixed - natural and synthetic
Geographical origin	India
Raw material category	Aroma chemical

TECHNICAL DATA SHEET

2. OLFACTORY CLASSIFICATION AND ODOUR PROFILE

Fragrance note	Base note
Primary olfactory family	Musky
Secondary olfactory family	Powdery
Additional classification	Ambery / Floral - Other / Fresh - Clean
Odour profile	Powerful, elegant and clean musk odour with powdery, slightly ambery, fruity and floral nuances
Application	Fragrance compositions, cosmetic products and food flavourings

3. DESCRIPTION AND FUNCTION IN FRAGRANCE COMPOSITION

Ambrettolide is a high-quality macrocyclic musk aroma chemical with a soft, clean and exceptionally persistent odour. It has an elegant musky character with powdery, slightly ambery, fruity and floral nuances, together with characteristic transparency and a clean, warm-skin effect.

Unlike heavier and more animalic musks, Ambrettolide gives the composition silky softness, naturalness and refined sensuality. It has high substantivity and remains perceptible for a long time on skin, hair and textiles without a harsh or suffocating effect.

Functional role in perfumery: Ambrettolide is used as an elegant musk base note, fixative and structural element of a fragrance composition. It increases longevity, volume and diffusivity, softens harsh transitions between notes and gives the final accord a clean, soft and silky character.

4. APPLICATION AND OLFACTORY COMPATIBILITY

Recommended use in fragrances: Ambrettolide is used to build clean, powdery and sensual musk bases and to increase the softness, longevity and diffusivity of a fragrance composition.

It is used to create and modify:

- clean and transparent musk accords;
- powdery and powdery-floral compositions;
- fragrances with a clean, warm-skin effect;
- floral-musky compositions;
- rose, jasmine, violet and iris accords;
- fruity-musky and slightly pear-like accords;
- ambery and amber-floral compositions;
- woody and woody-musky bases;
- aldehydic and soapy fragrances;
- modern unisex fragrances;
- fragrances for cosmetic products, soaps and household care products.

It combines well with Galaxolide, Ethylene Brassylate, Exaltolide, Habanolide, Helvetolide, Muscenone, Ambroxide, Iso E Super, sandalwood and cedarwood materials, ionones, methyl ionones, aldehydes, rose and jasmine materials, vanillin and soft ambery aroma chemicals.

TECHNICAL DATA SHEET

5. RECOMMENDED USE

Recommended use level	0.10-5.00% in the fragrance concentrate
Below 0.10%	Subtle rounding of the composition
0.10-5.00%	Clear, clean and persistent musk effect
Higher levels	Pronounced musk bases, according to the desired olfactory effect
Laboratory dilution	10% in ethanol, DPG or another suitable perfumery solvent

Ambrettolide may be added directly to the fragrance concentrate. For laboratory evaluation and more precise dosing, it may be pre-diluted. The stated range is a formulation recommendation, not a regulatory maximum concentration.

Safety note: The final concentration must comply with current IFRA Standards, the safety assessment, the intended use of the product and the regulations of the market where the product is placed on the market.

6. PHYSICOCHEMICAL AND TECHNICAL DATA

Appearance	Mobile liquid
Colour	Colourless to pale yellow
Relative density at 25 °C	0.950-0.958
Refractive index at 20 °C	1.477-1.481
Flash point	Above 100 °C, closed-cup method
Purity	Minimum 97.0%, determined by gas chromatography
Solubility	Practically insoluble in water; soluble in ethanol, perfumery oils and suitable organic solvents
Natural origin index according to ISO 16128	61.44%
Renewable carbon content	61.29%
Storage	At up to 15 °C, in the original, hermetically sealed container, protected from light, heat and air
Shelf life	24 months
Shelf-life conditions	Storage in the original container under the recommended conditions

TECHNICAL DATA SHEET

7. STABILITY AND STORAGE

Stable under the recommended storage conditions. Avoid prolonged exposure to heat, air and light. Carefully reseal opened containers after use. Confirm stability and compatibility in the finished formulation and intended packaging.

8. REGULATORY DATA AND STATUS

Declarable fragrance allergen	Oxacycloheptadecan-2-one, CAS 109-29-5, stated at a concentration of 2.00%
Vegan status	Not compliant with vegan requirements according to the supplied TDS
GMO status	Does not contain and is not derived from GMOs
Nanomaterials	Contains no nanomaterials
Antioxidants and stabilisers	None added
Solvents	None added
Halal status	Compliant with halal requirements
Kosher status	Compliant with kosher requirements
Palm oil and derivatives	Contains no palm oil, palm kernel oil or their derivatives

9. SAFETY INFORMATION

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

According to the supplied safety data sheet, the product is classified as hazardous to the aquatic environment:

H411	Toxic to aquatic life with long-lasting effects
------	---

Use appropriate protective equipment and avoid direct contact with skin and eyes. Prevent release into drains, soil and waterways. Collect spilled material and dispose of it in accordance with local regulations.

The final concentration in the finished product must comply with the safety assessment, intended use and the regulations of the market where the product is placed on the market.

10. 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.