



TECHNICAL DATA SHEET

ETHYLENE BRASSYLATE

Synthetic macrocyclic musk aroma chemical with a soft, clean and powdery character

1. RAW MATERIAL IDENTIFICATION

Product name	Ethylene Brassylate
Chemical name	1,4-Dioxacycloheptadecane-5,17-dione
Synonyms	Musk T; Ethylene Tridecanedioate; Ethylene Brassylic Acid Ester; Astratone
INCI name	ETHYLENE BRASSYLATE
CAS number	105-95-3
EC number	203-347-8
FEMA number	3543
IUPAC name	1,4-Dioxacycloheptadecane-5,17-dione
Molecular formula	$C_{15}H_{26}O_4$
Molecular weight	270.37 g/mol
Chemical group	Macrocyclic diester
Geographical origin	China
Raw material origin	Synthetic
Raw material category	Aroma chemical

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2. OLFATORY CLASSIFICATION AND ODOUR PROFILE

Fragrance note	Base note
Primary olfactory family	Musky
Additional classification	Powdery / Floral / Ambery
Odour profile	Soft, clean, sweet and powdery musk odour with warm, slightly floral and ambrette-like nuances
Application	Fragrance compositions and cosmetic products

3. DESCRIPTION AND FUNCTION IN FRAGRANCE COMPOSITION

Ethylene Brassylate is a synthetic macrocyclic musk aroma chemical widely used in modern perfumery because of its soft odour, good substantivity and compatibility with nearly all olfactory families. Structurally, it is a macrocyclic diester with a seventeen-membered ring.

Its odour profile is clean, soft, sweet and powdery, with warm musky, slightly floral and ambrette-like nuances. Unlike stronger polycyclic musks, Ethylene Brassylate does not appear heavy, greasy or aggressive. It provides a transparent musky background, softness and roundness.

It has good longevity and pronounced substantivity on skin, textiles and other surfaces. Its effect develops gradually and remains perceptible during the final stage of fragrance development, making it a fundamental building block for musk bases and a fixative for other fragrance materials.

At lower concentrations, it softens harsh transitions and links different parts of the composition. At higher concentrations, it creates a full, clean and elegant musk base suitable for floral, woody, ambery, powdery, marine and gourmand fragrances.

Functional role in perfumery: Macrocyclic musk base note, fixative and composition modifier. It extends fragrance longevity, increases substantivity, softens harsh transitions and gives the composition softness, fullness and a clean powdery-musky drydown.

4. APPLICATION AND OLFATORY COMPATIBILITY

Recommended use in fragrances: Ethylene Brassylate is used to build clean, soft, warm and powdery musk base notes and to improve the longevity, substantivity and overall roundness of a fragrance composition.

It is used to create and modify:

- clean and powdery musk accords;
- floral-musky and white-floral compositions;
- rose, jasmine, muguet, violet and iris accords;
- ambery and woody-ambery fragrances;
- woody compositions with sandalwood, cedarwood and vetiver;
- fresh, clean and soapy odour profiles;
- marine and ozonic compositions;
- fruity and gourmand accords requiring softness and longevity;
- fougère and chypre fragrances;
- fragrances intended to create a clean-skin effect;
- fragrances for soaps, cosmetic products and household care products.

It combines well with Galaxolide, Habanolide, Exaltolide, Ethylene Dodecanedioate, Ambrettolide, Helvetolide, Muscenone, Iso E Super, Ambroxide, Hedione, sandalwood, cedarwood materials, ionones, vanillin, coumarin and floral aroma chemicals.

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5. RECOMMENDED USE

Recommended use level	1.00-20.00% in the fragrance concentrate
1.00-5.00%	Modifier and fixative
5.00-20.00%	Pronounced, clean and persistent musk base
Higher levels	Compositions in which musk is the central olfactory theme
Laboratory dilution	10% or 50% in ethanol, DPG or another suitable perfumery solvent

Ethylene Brassylate may be added directly to the fragrance concentrate. At temperatures close to the lower limit of its melting range, clouding or partial crystallisation may occur. In this case, gently warm and homogenise the material before use. This physical change does not necessarily indicate a reduction in product quality. The stated range is a formulation recommendation, not a regulatory maximum concentration.

IFRA certificate: According to the manufacturer's certificate prepared in accordance with the 51st IFRA Amendment, Ethylene Brassylate is permitted up to 100% in the listed product categories. This is not a recommendation for use at 100%; the final level must be determined according to the desired olfactory effect, safety assessment and intended use of the finished product.

6. PHYSICOCHEMICAL AND TECHNICAL DATA

Appearance	Liquid
Colour	Colourless to pale yellow
Relative density at 20 °C	1.042-1.049
Relative density at 25 °C	1.038-1.045
Refractive index at 20 °C	1.465-1.475
Melting point	0-7 °C
Flash point	110 °C, closed-cup method, according to the current SDS
Boiling point	138 °C according to the current SDS; measurement conditions are not stated in the supplied data
Vapour pressure	Less than 0.01; the unit is not stated in the supplied data
Purity	97-100%
Water solubility	Insoluble
Solubility in ethanol	Soluble
Storage	In a cool place at up to 10 °C, in the original, hermetically sealed container with minimal headspace
Shelf life	24 months



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7. STABILITY AND STORAGE

Stable under normal conditions of use and storage. Avoid strong oxidising agents, strong acids and bases, and prolonged exposure to air, light and elevated temperatures. Store protected from air, light and heat sources; carefully reseal the container immediately after use. Confirm stability in the finished formulation and intended packaging.

8. REGULATORY DATA AND STATUS

Origin: Synthetic; geographical origin: China.

Vegan status: Vegan; contains no animal-derived ingredients.

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

Nanomaterials: Not stated in the supplied TDS.

9. SAFETY INFORMATION

Ethylene Brassylate is intended for professional use as an ingredient in fragrance and cosmetic compositions. Direct application of the undiluted material to the skin is not recommended.

According to the current SDS, it is classified as harmful to aquatic life with long-lasting effects.

Classification	Aquatic Chronic 3
H412	Harmful to aquatic life with long-lasting effects
P273	Avoid release to the environment
P501	Dispose of contents and container in accordance with applicable regulations

Acute oral toxicity	No data available
Acute dermal toxicity	No data available
Skin irritation	No data available
Serious eye damage / irritation	No data available
Respiratory or skin sensitisation	No data available
Phototoxicity	No data available
PBT status	Not considered persistent, bioaccumulative and toxic
vPvB status	Not considered very persistent or very bioaccumulative

During professional handling, avoid direct contact with skin and eyes, inhalation of vapour or aerosol and release into drains, soil or waterways. Use appropriate protective equipment when required by the risk assessment and ensure adequate workplace ventilation.

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.