

TECHNICAL DATA SHEET

Product Name: Caprylyl Glycol

INCI Name: Caprylyl Glycol

CAS Number: 1117-86-8

Chemical Classification: Alcohol

Functional Category: Preservative; Skin conditioning agent ~ emollient, hair care agent

IUPAC Name: 1,2-Octanediol

Description: Caprylyl glycol is a multifunctional cosmetic ingredient valued for its hydrating, antimicrobial, and stabilizing properties. As a member of the glycol group, it binds moisture, hydrates the skin, and leaves it soft. Additionally, it serves as an auxiliary preservative by inhibiting bacterial and fungal growth, reducing the need for synthetic preservatives. It enhances product texture and spreadability, making formulations more pleasant to use. It often acts as a solvent for other active ingredients, facilitating their integration into formulations. Mild and rarely irritating, it is suitable for sensitive skin. At higher temperatures (30–40°C), it remains liquid; at lower temperatures, it solidifies into a white, waxy substance, a typical trait of many glycols. This indicates its sensitivity to temperature variations. Caprylyl glycol is chemically stable and compatible with most cosmetic raw materials, with optimal usage at pH levels between 4 and 8. The substance typically contains $\geq 98.5\%$ caprylyl glycol and $\leq 0.5\%$ water. It is poorly soluble in water but easily dissolves in ethylene glycol, propylene glycol, glycerin, and other polyols.

Benefits:

- **Humectant:** Attracts and retains moisture, leaving the skin soft and supple.
- **Emollient Properties:** Soothes irritated skin, forming a protective barrier that reduces water loss and enhances natural hydration.
- **Antimicrobial Action:** Inhibits bacterial and fungal growth, improving the efficiency of other preservatives and extending product shelf life.
- **Product Stability:** Enhances formulation stability and compatibility with a wide range of ingredients, including surfactants, emulsifiers, and actives.

Disclaimer: The details provided here are specific to the identified material and may not remain accurate if that material is combined with other substances or used in different processes. The information presented is, to the best of the company's knowledge, considered precise and trustworthy as of the date mentioned. However, the company does not make any explicit or implied assurance, guarantee, or claim regarding the information's precision, trustworthiness, or comprehensiveness, and will not be held accountable for any losses, damages, or costs, whether direct or indirect, that arise from its use. Users are encouraged to independently verify the appropriateness and thoroughness of this information for their specific purposes.

TECHNICAL DATA SHEET

- Mildness: Non-irritating and well-tolerated, even by sensitive skin.

Usage Instructions: Caprylyl glycol is amphiphilic, possessing both hydrophilic (water) and lipophilic (oil) properties. With a neutral scent and color, it does not affect the final product's fragrance or appearance. Manufacturers recommend adding it after the emulsification process to minimize impacts on the emulsifier system. Commonly used at concentrations of 0.5–1% alongside phenoxyethanol for effective microbial preservation. It can also be used independently at 1% or 0.5% in deodorants. Suitable for external use only.

Source Materials: Alkylene oxide and glycerin

Production Method: Catalytic oxidation of the corresponding alkylene oxide

Animal Testing: Not tested on animals

GMO: Non-GMO

Vegan: Contains no animal-derived components

Raw Material Origin: China

Disclaimer: The details provided here are specific to the identified material and may not remain accurate if that material is combined with other substances or used in different processes. The information presented is, to the best of the company's knowledge, considered precise and trustworthy as of the date mentioned. However, the company does not make any explicit or implied assurance, guarantee, or claim regarding the information's precision, trustworthiness, or comprehensiveness, and will not be held accountable for any losses, damages, or costs, whether direct or indirect, that arise from its use. Users are encouraged to independently verify the appropriateness and thoroughness of this information for their specific purposes.