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TECHNICAL DATA SHEET

Product Name: Coco-Caprylate

INCI Name: Coco-Caprylate

CAS: 107525-85-9

Chemical Classification: Ester

Functional Category: Skin Conditioning Agent, Emollient

Description: Coco-Caprylate is a natural emollient known for its extremely light texture and quick absorption. It is often called "coco-silicone" because, after application, it significantly accelerates the penetration of plant oils from the surface to deeper layers of the skin. It leaves a light, velvety feel on the skin similar to silicone oils (such as Cyclomethicone). Coco-Caprylate also works effectively in enhancing the clarity of anhydrous formulations. Due to its stability and resistance to various temperatures, it is suitable for a wide range of formulations, including heat-free formulations like serums and lotions, where it blends easily with other ingredients. In formulations requiring ingredient melting, such as creams or balms, Coco-Caprylate can be added during the heating phase as it retains its properties and does not affect the product's stability. It is odorless, allowing the creation of products that do not interfere with the delicate fragrance of other ingredients. Coco-Caprylate is 100% natural and biodegradable, and it complies with COSMOS regulations. Saponification Value: 190 - 220
Spreading Value: 1300mm²/10min ; Oil Density (20°C): 0.856 - 0.862 g/cm³ ; HLB: 9

Mechanism of Action: Coco-Caprylate is an ester produced by reacting fatty acids from coconut and caprylic acid. The ester bond formed by the condensation of the carboxyl group of fatty acids (from coconut oil) and the hydroxyl group of the alcohol (caprylic alcohol) is key to Coco-Caprylate's functionality. This bond reduces the molecule's polarity compared to free fatty acids, allowing for faster and easier skin absorption. The ester bond also contributes to the silky texture and light sensation on the skin, particularly beneficial in cosmetic products that require lightweight emollients. The long alkyl chains of fatty acids provide hydrophobic characteristics responsible for creating a protective layer on the skin, preventing moisture loss and delivering long-lasting hydration. The hydrophobic properties, combined with reduced polarity, enable Coco-Caprylate to act as an excellent solvent for other lipophilic components in formulations,

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enhancing the stability and performance of the product. Coco-Caprylate's structure facilitates synergy with other ingredients in formulations, improving their distribution and absorption in the skin. This is particularly useful in products such as moisturizers, serums, and lightweight hair oils, where balancing light texture with effective hydration is essential.

Benefits:

- Provides a silky, smooth feel on the skin, leaving it soft.
- Acts as a silicone alternative, delivering a natural, lightweight feel.
- Compatible with heat-free formulations, easily blending with other ingredients.
- Stable at high temperatures, retaining quality when exposed to heat.
- Enhances sensory characteristics, providing a light, non-greasy feel.

Application Method: The optimal concentration of Coco-Caprylate in creams and lotions usually ranges from 2% to 10%. Lower concentrations of 2%-5% provide a mild softening and texture-enhancing effect, while higher concentrations, up to 10%, offer intense hydration and skin smoothness. In body oils, Coco-Caprylate can be used in pure form but is often combined with other oils, such as jojoba, almond, or argan, to achieve an optimal consistency and feel on the skin. This combination allows for long-lasting hydration without a heavy or greasy sensation. In hair care products, such as shampoos and conditioners, Coco-Caprylate is used at concentrations of 1% to 5%. In shampoos, it conditions the hair, making it softer and easier to style, while in conditioners, it smoothens and softens the hair, enhancing its appearance. In sun protection formulations, Coco-Caprylate is used at concentrations of 3% to 10%, improving the product's texture, making it easier to apply, and ensuring even distribution of UV filters, potentially increasing sun protection efficacy.

Animal Testing: Not tested on animals

GMO: Non-GMO

Vegan: Contains no animal-derived components