

TECHNICAL DATA SHEET

Product Name: Cetearyl Alcohol & Cetearyl Glucoside

INCI Name: Cetearyl Alcohol & Cetearyl Glucoside

CAS: 8005-44-5 & 246159-33-1

Chemical Classification: Mixture

Functional Category: O/W emulsifier, Viscosity modifier ~ increases viscosity, Stabilizer
~ emulsion stabilizer

IUPAC Name: Cetearyl Alcohol: (hexadecan-1-ol; octadecan-1-ol); D-Glucopyranose, C16-18 alkyl glycosides

Description: Cetearyl Alcohol & Cetearyl Glucoside is a mild, non-ionic emulsifier certified for use in natural cosmetics, in compliance with strict COSMOS standards. It creates stable oil-in-water (O/W) emulsions, ensuring long-lasting formulation stability. This emulsifier is derived from renewable plant sources, originating from polysaccharides and fatty alcohols, making it ideal for sustainable cosmetic products that adhere to eco-conscious principles. Its unique feature is its ability to form lamellar liquid crystals, structures that mimic the natural skin barrier. These crystals help retain moisture on the skin's surface, providing deep nourishment and protection. Cetearyl Alcohol & Cetearyl Glucoside allows for the formulation of products that are exceptionally comfortable on the skin, without leaving a heavy or sticky feel. Emulsions containing this emulsifier have a creamy texture, are easy to apply, and absorb quickly, leaving the skin feeling silky and soft. This emulsifier is particularly valued for its velvety finish, enhancing the luxurious feel of products, making it perfect for high-end creams, lotions, and serums. Its exceptional flexibility allows it to stabilize various types of oil phases, including vegetable and essential oils, silicone oils, and esters. This makes Cetearyl Alcohol & Cetearyl Glucoside the ideal choice for formulations that span a wide range of textures—from light lotions to rich creams with a high oil phase content, a challenge for many other emulsifiers. Cetearyl Alcohol & Cetearyl Glucoside is highly effective in stabilizing emulsions even in the presence of a high percentage of active ingredients or complex formulas containing plant extracts, UV filters, or other active components. Its stability in formulations ensures the long-term preservation of product integrity, which is crucial for the longevity and efficacy of skincare products. Due to its mild nature and ability to support skin

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barrier regeneration, Cetearyl Alcohol & Cetearyl Glucoside is ideal for formulations aimed at sensitive or irritated skin. It soothes the skin and does not cause irritation, making it a perfect choice for products intended for atopic skin, baby care, as well as anti-aging lines focused on gentle and sensitive skin.

Mechanism of Action: Cetearyl Alcohol and Cetearyl Glucoside are natural, non-ionic emulsifiers with excellent biodegradability. They have outstanding emulsifying properties and excellent chemical stability. Cetearyl Alcohol is a blend of fatty alcohols, specifically cetyl alcohol (with 16 carbon atoms) and stearyl alcohol (with 18 carbon atoms). Its chemical structure includes long hydrocarbon chains with hydroxyl groups. The hydroxyl group is hydrophilic, allowing Cetearyl Alcohol to bond with water molecules, while the long hydrocarbon chains are hydrophobic and bond with oils. These properties enable Cetearyl Alcohol to act as an efficient surfactant and emulsifier, stabilizing both water-in-oil (W/O) and oil-in-water (O/W) emulsions. The long hydrocarbon chains of Cetearyl Alcohol not only increase the viscosity of formulations, which is useful for creating thick creams and lotions, but also act as emollients, giving the products a smooth and creamy texture. Additionally, Cetearyl Alcohol can enhance the aesthetic appearance of products by imparting an opaque, milky color. On the other hand, Cetearyl Glucoside consists of a combination of fatty alcohols and glucose. Its chemical structure includes a hydrophobic part (fatty alcohol chain) and a hydrophilic part (glucose). The hydroxyl groups present in glucose allow interaction with the aqueous phase, while the long-chain hydrocarbons in fatty alcohols interact with the oily components. This structure enables Cetearyl Glucoside to create stable emulsions, maintaining a homogeneous mixture of oil and water. Together, Cetearyl Alcohol and Cetearyl Glucoside form an efficient emulsifier that stabilizes emulsions and improves the texture of cosmetic products.

Benefits:

- Combination of fatty alcohols and glucosides, derived from plant sources. Ingredients are biodegradable and environmentally friendly.
- Creates stable oil-in-water emulsions and enhances formulation homogeneity.
- Compatible with a wide range of oils, butters, and active ingredients, allowing for diverse textures.
- Products have a pleasant texture on the skin, absorb quickly, and do not leave a greasy feel.

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- Prolongs product stability, preventing phase separation over time.
- Helps retain moisture in the skin, providing long-lasting hydration.
- Can be used at low temperatures, preserving thermolabile ingredients.
- Complies with standards like COSMOS and ECOCERT for natural and organic cosmetics.
- Stable with active ingredients like vitamins, plant extracts, and peptides.
- Provides the skin with a smooth and velvety texture, without a greasy feel.
- Can be used in various products, such as creams or hair conditioners.

Usage Instructions: Cetearyl Alcohol & Cetearyl Glucoside is a versatile emulsifier widely used in cosmetic formulations due to its ability to create stable and homogeneous emulsions. In practice, it is added to the oil phase of the product, which is heated until all ingredients are melted and homogenized. The oil phase is then gradually added to the water phase with constant mixing, allowing the formation of a stable emulsion. Recommended concentrations vary depending on the type of cosmetic product being made. For light body or face lotions, the emulsifier concentration typically ranges between 1% and 3%. For medium-rich creams, such as daily moisturizers, the recommended concentration is between 3% and 5%. For rich, nourishing creams intended for dry skin or night care, the concentration can range from 5% to 8%. In hair care products, such as conditioners or masks, the emulsifier is used in concentrations from 2% to 6%, depending on the desired texture and functionality of the product. It is important to adjust the emulsifier concentration according to the overall formulation composition and the desired properties of the final product. Additionally, its compatibility with various oils, butters, and active ingredients allows formulators to create a wide range of products with different textures and sensory profiles, providing consumers with a pleasant usage experience.

Animal Testing: Not tested on animals

GMO: Non-GMO

Vegan: Does not contain animal-derived components

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