

TECHNICAL DATA SHEET

INCI Name: Glyceryl Stearate, Ceteareth-20, Ceteareth-11, Cetearyl Alcohol, Cetyl Palmitate

CAS Number: 85251-77-0, 68439-49-6, 68439-49-6, 36653-82-4, 112-95-5, 540-10-3

Chemical Classification: Mixture

Functional Category: Surfactant ~ Emulsifier

Description: EmuMaker AE is a complex non-ionic emulsifier designed for creating stable oil-in-water emulsions. It excels at producing fine, stable textures without a sticky feeling. Belonging to the group of emulsifiers based on polyglycerol and fatty acids of vegetable origin, it is ideal for achieving smooth, elegant textures without heavy film residue, enabling even distribution of active ingredients. It tolerates well the presence of botanical extracts and high lipid concentrations. Used in moisturizing and nourishing creams, lotions, body milks, serums, hair conditioners, and masks, it provides softness and lasting hydration to the skin, and improves smoothness and combability in hair products. Recommended usage is between 3% and 5%. Stable across pH 4.5 to 8, it is suitable for various formulations, including products for sensitive and children's skin. Its mild and functional nature makes it a reliable choice for aesthetically pleasing, stable cosmetic formulations. Easy to use, it provides excellent sensory properties. EmuMaker AE appears as white to pale-yellow granules with a mild odor, melting between 44 and 50°C. Processing is straightforward at moderate temperatures. It contains low levels of free acids (below 5 mg KOH/g), contributing to gentle formulations and stability. The saponification value ranges from 90 to 105 mg KOH/g, indicating a balanced ratio of fatty acids and alcohols. A hydroxyl value of 140–163 mg KOH/g highlights good water-binding capability. With less than 1% water content, it ensures long shelf-life and storage stability. High purity is affirmed by dioxane content under 5 ppm and ethylene oxide below 1 ppm, guaranteeing safety in cosmetic use.

Mechanism of Action: EmuMaker AE belongs to non-ionic emulsifiers, molecules without electrical charges. Unlike ionic emulsifiers (anionic, cationic, amphoteric), non-ionic emulsifiers do not form ions in water, enabling stabilization by linking oil droplets with the aqueous phase. Their neutral nature makes them gentle on skin and mucous membranes, stable across a wide pH range, and compatible with various active ingredients, botanical extracts, lipids, and essential oils. Glyceryl Stearate reduces

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TECHNICAL DATA SHEET

surface tension between oil and water phases, aiding homogeneous blending, smooth texture, and skin softening. Ceteareth-20 and Ceteareth-11 ensure fine oil droplet dispersion, enhancing spreadability and preventing phase separation. Cetearyl Alcohol functions as a co-emulsifier and thickener, adding viscosity and stability for creamy, comfortable textures, also acting as an emollient. Cetyl Palmitate contributes as a thickener and emollient, enhancing texture fullness and stability, providing smoothness without greasy residues. Together, these ingredients create stable, creamy, lightweight emulsions with excellent spreadability and a pleasant skin feel.

Benefits:

- Creates stable and persistent emulsions
- Provides smooth, elegant, lightweight textures
- Easily compatible with botanical extracts and natural oils
- Offers lasting hydration and softness
- Improves product spreadability and absorption
- Enhances hair smoothness and ease of combing
- Suitable for sensitive and children's skin formulations
- Easy to handle and process
- Maintains product stability over time
- Does not clog pores or leave greasy residue

Usage Instructions: EmuMaker AE is incorporated into the oil phase, heated to 60 - 70°C, while the aqueous phase is heated separately to the same temperature. Upon combining both phases with continuous mixing, a stable, homogeneous emulsion forms. Concentrations of 3-4% create light, fast-absorbing textures for moisturizing/day creams and lotions. Concentrations up to 5% are recommended for richer night creams, body milks, and hair masks, enhancing product fullness and stability. Hair conditioners typically use 3-5%, facilitating smoothness and easier combing. Stable within a pH range of 4.5 to 8, it is suitable for sensitive and children's skin products, avoiding destabilization or irritation risks.

Natural or Synthetic Ingredient: EmuMaker AE is a cosmetic emulsifier synthesized from vegetable-derived fatty acids and polyglycerol under controlled chemical conditions, producing a stable, pure, and consistent raw material. Although synthetically produced, it is derived from natural sources.

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TECHNICAL DATA SHEET

Animal Testing: Not tested on animals

GMO: GMO-free

Vegan: Contains no animal-derived ingredients

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