

## TECHNICAL DATA SHEET

**Product Name:** PEG-7 Glyceryl Cocoate

**INCI Name:** PEG-7 Glyceryl Cocoate

**CAS:** 68201-46-7

**Chemical Classification:** Alcohol ~ Alkoxyated glyceryl ester of coconut fatty acids

**Functional Category:** Non-ionic surfactant, emollient, solubilizer, co-emulsifier, skin and hair conditioning agent

**Description:** PEG-7 Glyceryl Cocoate is a non-ionic surfactant and emollient obtained by the reaction of coconut oil with polyethylene glycol. It is used in cosmetics for its cleansing and skin-conditioning properties. It is highly compatible with other surfactants, making it particularly useful in shower gels, bath products, and shampoos. It reduces the aggressiveness of stronger cleansing agents and is easily soluble in water. It can be added directly to the final phase of formulation or at any stage of production, simplifying its use. PEG-7 Glyceryl Cocoate has pronounced emollient properties, leaving the skin soft, hydrated, and smooth. It prevents dryness and tightness and is suitable for all skin types, including sensitive skin. It does not cause irritation and does not clog pores. It is commonly used in hair care formulations to ease detangling and add shine. It forms a light film on the skin and hair, helping to retain natural moisture and protect against external factors. Typical usage concentration ranges from 0.5% to 5%. It is a clear liquid with a characteristic odor, soluble in water and alcohols, insoluble in oils, and creates oil-in-water emulsions. HLB value = 11.

**Mechanism of Action:** The action of PEG-7 Glyceryl Cocoate is based on its amphiphilic molecular structure, containing both hydrophilic and lipophilic parts. This structure allows the molecule to interact easily with oily and aqueous substances. In contact with impurities and oils on the skin's surface, the lipophilic part binds them, enabling their detachment and removal. Simultaneously, the hydrophilic part assists in rinsing these particles off with water. In addition to its cleansing effect, PEG-7 Glyceryl Cocoate also provides conditioning benefits by forming a thin protective layer on the skin and hair, reducing transepidermal water loss, retaining moisture, and preventing dehydration. It also softens the surface of the skin and hair, contributing to smoothness, shine, and easier detangling. Due to its mild action and good compatibility with the skin's lipid

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barrier, it does not disrupt natural protective functions and does not cause irritation.

### Benefits:

- Facilitates easy mixing of oil and water phases, creating stable cosmetic emulsions.
- Softens the skin, leaving it smooth with a gentle, silky feel.
- Attracts moisture, hydrates the skin, and reduces dryness.
- Eases hair detangling, making it softer, shinier, and easier to style.
- Improves product spreadability, making the texture more pleasant.
- Solubilizes ingredients that are otherwise difficult to blend with water, easing formulation incorporation.
- Gently removes impurities from the skin and hair without causing irritation.
- Combines well with other cosmetic ingredients.

**Usage:** PEG-7 Glyceryl Cocoate can be added at any stage of cosmetic product manufacturing, though it is most often introduced at the end of the production process. Due to its excellent water solubility, it blends easily with other ingredients, simplifying the formulation process. The concentration is determined based on the desired characteristics of the final product. In cleansing products such as shampoos, shower gels, and bath products, it is typically used at concentrations between 0.5% and 3%. In emulsions, lotions, and creams where emollient and conditioning effects are more prominent, it is usually applied in concentrations up to 5%. Lower concentrations improve spreadability, softness, and hydration, while higher concentrations enhance emulsion stability, texture, and the soft, smooth feel of skin and hair. Its mild nature makes it safe for daily use, including formulations for sensitive skin. For external use only.

**Natural or Synthetic Origin:** PEG-7 Glyceryl Cocoate is obtained through the chemical reaction of natural fatty acids from coconut oil with a synthetic compound — polyethylene glycol (PEG). Therefore, it is considered a derivative of a natural raw material but is not a fully natural ingredient.

**Animal Testing:** Not tested on animals.

**GMO:** Not GMO.

**Vegan:** Does not contain ingredients of animal origin.

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