

TECHNICAL DATA SHEET

Product Name: ReoFlow SAT

INCI Name: Sodium acrylate/Sodium Acryloyldimethyl Taurate Copolymer

CAS Number: 77019-71-7

Chemical Classification: Synthetic Polymer

Functional Category: Viscosity Modifier; Emulsion Stabilizer

Origin of Raw Material: Italy

Description: Sodium acrylate/(Sodium Acryloyldimethyl) Taurate Copolymer is a copolymer of sodium acrylate and sodium acryloyldimethyl taurate monomers. The chemical formula of this copolymer is $(C_3H_3NaO_2)_x(C_{13}H_{21}NO_4S)_y$, where x and y represent the number of repeating units in the polymer chain. It is a white powder, easily soluble in water. Melting point: 160-170°C; pH 5.0-6.0. Acts as an emulsifier, helping to mix ingredients that typically do not mix well, such as oil and water. Functions as a thickener. Increases the viscosity of products to achieve the desired consistency.

Benefits:

- **Thickener:** Effective thickening agent. Increases the viscosity of cosmetic formulations. Forms gels across a wide pH range (4-12).
- **Emulsifier:** Emulsifies all types of oily phases (up to 40%), including silicones and vegetable oils without adding a conventional emulsifier. Used in making cold emulsions.
- **Stabilizer:** Acts as a stabilizer in cosmetic formulations, preventing the separation of different ingredients in the product. Ensures uniformity and consistency over time, improving the shelf life and performance of the final product.
- **Improves texture:** Gives cosmetic products a smooth and silky texture. Helps create a pleasant and luxurious feel on the skin.
- **Water dispersibility:** The copolymer easily dissolves in water, facilitating its inclusion in water-based formulations.
- **Flexibility in formulations:** Thanks to thickening and stabilizing effects, the copolymer allows for the formulation of a variety of cosmetic products with different

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textures and consistencies.

- **Non-irritating:** Generally considered non-irritating and safe for use in cosmetics. Often used in products intended for sensitive skin.

- **Compatibility:** The copolymer shows good compatibility with various cosmetic ingredients, allowing for its easy inclusion in different formulations without causing negative effects.

Usage Instructions: Emulsions: 0.5-2%. Can be added to the oil or water phase or at the end of emulsification. Requires thorough mixing with a hand mixer to achieve smooth creams. Gel creams: 1-5%, and in formulations over 3% for best performance. It is recommended to use at least a 12% oily phase. The CIR (Cosmetic Ingredient Review), an independent cosmetic ingredient review panel, deemed sodium acrylate/sodium acryloyldimethyl taurate copolymer safe for use in cosmetics up to a concentration of 3.2% in 2017. For external use only.

Applications: Used in making gel-creams, emulsion gels, cold emulsions, lotions, creams, skin lightening/self-tanning products, sun protection products, baby care products, mascara, base...

Method of Production: Sodium acrylate/sodium acryloyldimethyl taurate copolymer is obtained through a copolymerization process, where sodium acrylate and sodium acryloyldimethyl taurate are combined in the presence of water and a catalyst. This leads to the formation of a polymer chain, which is then purified and processed into a powder for use in cosmetic products.

Animal Testing: The substance has not been tested on animals.

GMO: Not GMO

Vegan: Does not contain animal-derived components.

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