Import and distribution for Serbia: Farmadria DOO
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TECHNICAL DATA SHEET

Product Name: Behetrimonium Chloride

INCI Name: Behentrimonium Chloride & Isopropanol

CAS: 17301-53-0, 67-63-0

Chemical Classification: Synthetic polymer, quaternary ammonium compound, mixture

Functional Category: Hair conditioning agent, forms flexible, cohesive, and continuous films

IUPAC Name: Docosyl(trimethyl)azanium;chloride
Behenyl trimethyl ammonium chloride

Description: Behentrimonium Chloride is a quaternary ammonium salt widely used in cosmetic formulations, primarily as a conditioning and antistatic agent in hair care products. Its effectiveness is based on its ability to neutralize the negative electrical charge on hair strands, enabling easier detangling and preventing frizz. Thanks to these properties, Behentrimonium Chloride is commonly found in conditioners, hair masks, and products designed to reduce damage caused by brushing. This ingredient also exhibits emulsifying properties, contributing to the stability of formulations that combine water and oil. It is particularly valued in products requiring a creamy texture and uniformity, as it helps create stable emulsions. Behentrimonium Chloride is compatible with various raw materials, making it suitable for a wide range of formulations. It enhances the aesthetic properties of hair while providing a lasting silky smooth feel. At room temperature (25°C), Behentrimonium Chloride is a solid in pellet form, white to slightly yellowish in color, with a characteristic odor. Its pH in a water-ethanol (1:1) solution ranges between 5 and 8, making it slightly acidic to neutral. It is non-flammable and poses no fire risk under standard storage conditions. In water, it is dispersible, forming a suspension rather than dissolving completely. Isopropanol serves as an auxiliary ingredient with several key roles: preventing dryness and irritation to the skin and hair while maintaining product stability and effectiveness.

Benefits:

- Improves hair detangling by reducing friction between strands.

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- Prevents frizz by neutralizing static electricity.
- Provides hair with a silky feel and smooth texture.
- Contributes to the stability of emulsions in cosmetic formulations.
- Enables the creation of creamy textures in hair care products.
- Compatible with a wide range of raw materials, facilitating formulation.
- Effectively conditions hair and enhances its appearance.
- Reduces hair damage caused by brushing and mechanical stress.

Usage: Behentrimonium Chloride is used in hair care products such as conditioners, masks, and treatments for damaged hair. Recommended concentrations depend on the type of product and the desired effect. In rinse-off conditioners, it is typically used at 1%–3%, providing easy detangling and softening. In intensive treatments like masks, concentrations may range between 3% and 5%, offering deeper conditioning and regeneration. In leave-in products, it is used at lower concentrations, usually below 1%, to avoid weighing down the hair or creating a greasy film. It is important to note that Behentrimonium Chloride is typically combined with water and oils in emulsions, dissolved during the heated phase to ensure homogeneity and product stability. Exceeding recommended concentrations can lead to skin and scalp irritation, so adhering to industry guidelines is essential for safe use.

Natural or Synthetic Ingredient: Behentrimonium Chloride is a synthetic cosmetic ingredient. It is produced through chemical processing of natural raw materials, often rapeseed oil or similar oils rich in behenic acid. While its origin may be natural, the final product results from complex chemical reactions.

Animal Testing: Not tested on animals

GMO: Non-GMO

Vegan: Does not contain animal-derived components