Import and distribution for Serbia: Farmadria DOO
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TECHNICAL DATA SHEET

Product Name: Propanediol

INCI Name: Propanediol 1,3

CAS: 504-63-2

Functional Category: Solvent, viscosity modifier, skin conditioning agent ~ humectant

Chemical Classification: Alcohol

IUPAC Name: Propane-1,3-diol

Description: Propanediol 1,3 is a diol, a bivalent alcohol. It is derived from natural sources, most commonly through the fermentation of natural glycerol. It serves as a substitute for propylene glycol, making it suitable for formulations based on natural and sustainable principles. It functions as a solvent, humectant, and formulation stabilizer. As a solvent, it effectively dissolves active ingredients such as vitamins and plant extracts, enabling uniform distribution in products. Its moisturizing properties make it ideal for dry and sensitive skin care, helping retain moisture without leaving a greasy feel. Unlike propylene glycol, it has a lower irritation potential, making it a preferred choice for baby products and those designed for sensitive skin. By enhancing preservative efficacy, it helps protect formulations from uncontrolled microbial growth. Propanediol 1,3 is a viscous, clear, odorless liquid with a slightly sweet taste. Its density is approximately 1.05 g/cm³, slightly denser than water. The boiling point is around 214°C. It is miscible with water and alcohols, enabling excellent solubilization. Its refractive index is about 1.43, indicating its optical purity.

Benefits:

- Acts as a humectant, attracting and retaining moisture in the skin.
- Enhances the absorption of active ingredients in formulations.
- Reduces the greasy feel of products, leaving a lightweight sensation on the skin.
- Stabilizes emulsions, extending product shelf life.
- Provides a smooth and pleasant texture to cosmetic formulations.
- Suitable for sensitive skin as it rarely causes irritation.
- Enables the dissolution of a wide range of ingredients, including natural

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extracts.

Usage Instructions: Propanediol is a multifunctional cosmetic ingredient used as a humectant, solvent, penetration enhancer, and substitute for glycerin or propylene glycol. It is gentle and suitable for all skin types, including sensitive skin. In moisturizing products like serums and creams: used at concentrations of 2% to 5%, improving moisture retention and providing a pleasant feel. In toners and lotions: used at lower concentrations, 1% to 3%. In cleansing formulations: used at 3% to 10%, providing mild cleansing and preventing skin dryness. In hair products: hydrates and facilitates application. As a solvent for active substances: added in concentrations up to 20%. Formulations must be carefully balanced to maintain desired texture and occlusiveness. Propanediol 1,3 is compatible with various natural and synthetic ingredients and is added to the aqueous phase of formulations. For external use only.

Source Material: Corn sugar

Production Method: Fermentation of corn sugar

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

GMO: Non-GMO

Vegan: Contains no animal-derived components