

TECHNICAL DATA SHEET

Product Name: Green Tea Extract & Hyaluronate Gel

INCI Name: Aqua, Glycerin, Sodium Hyaluronate, Camellia Sinensis Leaf Extract, Benzyl Alcohol, Dehydroacetic Acid

CAS: 7732-18-5, 56-81-5, 9067-32-7, 84650-60-2, 100-51-6, 520-45-6

Product Quality: Ready-to-use hydrating complex based on Sodium Hyaluronate and a water-glycerin extract of green tea.

Chemical Classification: Mixture; aqueous hydrating gel based on a polysaccharide and botanical extract.

Functional Category: Humectant; soothing agent; antioxidant botanical complex; skin-conditioning agent.

Description: Green Tea Extract & Hyaluronate Gel is a combination of a water-glycerin extract of green tea (*Camellia sinensis*) and Sodium Hyaluronate in gel form. Water and glycerin provide a humectant base and enable even distribution of the functional components on the skin. Sodium Hyaluronate binds water in the superficial layers of the skin and forms a thin hydrating film, thereby contributing to the maintenance of hydration, softness, smoothness and the appearance of elasticity, while helping reduce transepidermal water loss. Green tea extract may contain polyphenols, including catechins, whose exact composition and concentration depend on the extraction system and standardization of the raw material. These constituents contribute to the antioxidant profile of the product and may help protect the skin from oxidative processes associated with external stressors. In cosmetic formulations, green tea extract is commonly used in products intended for skin prone to visible redness, imperfections and excess shine; however, claims relating to direct reduction of redness or regulation of sebum should be supported by documentation for the specific extract and the finished formulation. The combination of Sodium Hyaluronate, glycerin and green tea extract provides a lightweight hydrating and antioxidant complex suitable for different skin types. The gel has a light texture, spreads easily and does not leave a pronounced greasy feel. The system is preserved with a combination of Benzyl Alcohol and Dehydroacetic Acid and is intended for use in aqueous cosmetic formulations.

Physicochemical Properties: Lightweight aqueous gel compatible with the water phase of cosmetic formulations. Sodium Hyaluronate is a hydrophilic polysaccharide with pronounced water-binding capacity, while glycerin additionally supports the humectant effect. The stability and viscosity of the complete system may depend on pH, electrolyte concentration, the presence of cationic ingredients and other polymers in the finished formulation.

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Bioactive Components: Sodium Hyaluronate acts primarily as a humectant and film-forming polymer. Glycerin additionally binds and retains water in the stratum corneum. Green tea extract may contain catechins and other polyphenolic constituents, including epigallocatechin gallate (EGCG), epigallocatechin, epicatechin gallate and epicatechin, in amounts that depend on extraction and standardization. These constituents contribute to the antioxidant character of the extract. Their exact content should not be assumed without analytical documentation for the specific product.

Benefits:

- **Intensive hydration:** contributes to increasing and maintaining moisture levels in the superficial layers of the skin.
- **Moisture retention:** helps reduce transepidermal water loss by forming a lightweight hydrating film.
- **Antioxidant protection:** green tea polyphenols contribute to protecting the skin from oxidative processes.
- **Soothing care:** suitable for formulations intended for skin prone to discomfort and visible signs of irritation.
- **More balanced skin appearance:** may contribute to a cared-for appearance of skin prone to excess shine and imperfections.
- **Softness and smoothness:** contributes to a softer, smoother and more supple skin feel.

Usage: Green Tea Extract & Hyaluronate Gel is added during the cool-down phase of the formulation, preferably at temperatures below 40 °C, in order to preserve the stability of Sodium Hyaluronate and the botanical constituents of green tea extract. It may be incorporated directly into the aqueous phase or into an already prepared emulsion with gentle mixing until complete homogenization. In serums and gels intended for hydration and antioxidant care, it is most commonly used at 1-5%. In creams and lotions for daily care, it is typically used at approximately 0.5-3%. In facial masks, particularly formulations intended for soothing and revitalizing care, it may be used at 2-10%. In facial toners and mists, it is generally used at lower concentrations, typically 0.1-1%. In formulations intended for sensitive areas, such as the eye area, use should be based on the safety assessment of the finished product and the specification of the particular green tea extract. It is compatible with most water-soluble raw materials, including humectants, antioxidants and mild active ingredients. The recommended pH range of the finished formulation is approximately 4.5-6.5. For external use only.

Animal Testing: In accordance with EU Regulation (EC) No. 1223/2009 on cosmetic

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products, this raw material has not been tested on animals. Safety assessment is based on available toxicological data, scientific literature and validated alternative testing methods (in vitro and in silico). In silico is a term used for testing and assessment methods carried out using computer models and simulations, rather than laboratory testing on living organisms (in vivo) or cell cultures (in vitro). This note serves solely for informational purposes for further use of the raw material in cosmetic formulations.

GMO: Non-GMO

Vegan: Contains no animal-derived components.

Country of Origin: China

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