

TECHNICAL DATA SHEET

Product Name: Hydrolyzed Corn Protein

INCI: Water, Hydrolyzed Corn Protein, 1,2-dihydroxypentane, (+)-Arabinogalactan, 3-o-Ethyl Ascorbic Acid, Benzyl Alcohol, Potassium Sorbate, Sodium Benzoate

CAS: 7732-18-5, 100209-41-4, 5343-92-0, 9036-66-2, 86404-04-8, 100-51-6, 24634-61-5, 532-32-1

Chemical Classification: Mixture, Proteins/derivatives

Functional Category: Conditioner for skin and hair care.

Description: Hydrolyzed corn protein is an ingredient derived from corn gluten. It undergoes an enzymatic hydrolysis process to break it down into smaller peptide fragments. This process not only reduces the molecular weight of the protein but also enhances its bioavailability and functionality in cosmetic products. Due to its structure, hydrolyzed corn protein has a high moisture-binding capacity, making it particularly useful in skin and hair hydration products. When used in skincare formulations, it acts as a humectant. Besides hydration, it strengthens the skin's protective barrier, increasing its resistance to external aggressors such as pollution and harmful UV rays. In hair care products, hydrolyzed corn protein offers multiple benefits. It binds to the hair, fills in damaged areas, and repairs the hair's structure. This strengthens the hair, making it less prone to breakage and split ends while improving its shine and smoothness. Thanks to its ability to form a protective film on the hair's surface, this protein helps shield hair from thermal damage caused by styling and from environmental stressors. An important aspect of hydrolyzed corn protein is its role in tissue regeneration. Due to the presence of essential amino acids, it promotes natural cell renewal processes, contributing to a healthier and more revitalized appearance of both skin and hair. Its mild nature makes it suitable for use in products intended for sensitive skin, including baby products, as well as formulations designed for everyday care. In anti-aging products, it helps reduce fine lines and wrinkles by improving skin elasticity. Due to its plant-based origin, it is eco-friendly and meets the requirements for vegan, cruelty-free products that do not harm the environment. The solution is compatible with ionic and non-ionic surfactants. It is preserved with benzyl alcohol, sodium benzoate, and potassium sorbate.

Mechanism of Action: Hydrolyzed corn protein has a unique mechanism of action.

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Through hydrolysis, proteins are broken down into smaller peptides and amino acids, making them easier to absorb. When applied to the skin, hydrolyzed corn protein acts as a humectant, attracting and retaining moisture in the epidermis. This moisture-retention ability helps restore the skin's natural hydration, increasing its elasticity and reducing dryness. Additionally, these small peptides actively participate in repairing damaged proteins in the skin, strengthening its protective layer and making it more resistant to external factors such as pollution and UV radiation. On hair, hydrolyzed corn protein works by binding to damaged areas of the hair cuticle, restoring its structure. Damage caused by chemical treatments, heat, or mechanical stress can weaken the hair, but this protein helps fill in those damaged areas, making the hair stronger and more resistant to breakage. Moreover, the proteins form a thin protective layer around the hair, which shields it from further damage and moisture loss, enhancing its shine and smoothness. This protective film not only retains moisture within the hair but also helps reduce frizz and gives the hair a silky feel. As a hair conditioner, it offers an alternative to animal-derived keratin, helping restore hair after bleaching. It successfully smooths the hair and facilitates easier detangling. Hydrolyzed corn protein also possesses antioxidant properties, contributing to cell protection from damage caused by free radicals. In this way, it helps reduce visible signs of skin aging, such as fine lines and wrinkles. It can also promote the regeneration of damaged skin and accelerate tissue repair. When combined with other active ingredients, hydrolyzed corn protein enhances the effects of hydration and regeneration, making it a valuable ingredient in a wide range of cosmetic products, from moisturizers to hair care products.

Benefits:

- Hydrolyzed corn protein attracts and retains moisture in the skin and hair, improving hydration and preventing dryness.
- It helps repair damaged skin and hair, improving their structure and elasticity.
- Strengthens the hair, reduces breakage, and makes it more resistant to external factors and heat treatments.
- Gives hair shine and softness, making it healthier and easier to style.
- Forms a thin protective film on the skin and hair, helping retain moisture and protecting against external influences.

Usage: Hydrolyzed corn protein is used in various cosmetic formulations due to its moisturizing and restorative properties. In skincare products like moisturizers and

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serums, it is typically used in concentrations between 1% and 5%, to help improve skin hydration and elasticity. Due to its ability to attract and retain moisture, it is often used in formulations for dry skin or as part of anti-aging treatments. This protein can aid in repairing damaged skin, improving its structure and resilience. In hair care products, such as shampoos, conditioners, and masks, hydrolyzed corn protein is used in similar concentrations, generally between 0.5% and 3%. Its role in these products is to strengthen the hair, reduce breakage, and enhance its shine. It helps restore damaged areas of the hair, making it more resistant to external factors and heat treatments. Hydrolyzed corn protein dissolves easily in water and can be added to the aqueous phase of formulations. Due to its mild nature and compatibility with other ingredients, it can be used in various types of cosmetic products designed for hydration, regeneration, and protection of skin and hair.

Raw Material Source: Corn (Zea Mays)

Production Method: Corn proteins are extracted from specially purified corn kernels. By adding appropriate enzymes, free amino acids and peptides are obtained.

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

GMO: Non-GMO

Vegan: Does not contain animal-derived components.

Storage: Hydrolyzed corn protein can be transported at room temperature, between 20°C and 25°C, without significantly affecting its quality, as it remains stable for a short period under such conditions. However, to maintain its bioactivity and integrity for extended periods, it is recommended to store it in a refrigerator at a temperature between 4°C and 8°C. Low temperatures help prevent protein degradation, oxidation, or loss of efficacy, prolonging its shelf life and preserving its functional properties in formulations. Refrigeration also reduces the risk of microbiological contamination or unwanted changes in the texture and quality of the ingredient.

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