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TECHNICAL DATA SHEET

Product Name: Chamomile Flower Powder Standardized to Apigenin 7%

INCI Name: Chamomilla Recutita Flower Extract

CAS: 84082-60-0

Product Quality: The standardized chamomile flower extract containing 7% apigenin is a high-quality botanical raw material obtained through controlled extraction of Chamomilla recutita, with a laboratory-verified apigenin concentration. It is characterized by high purity, stability, and pronounced soothing and anti-inflammatory properties, making it a reliable active ingredient for formulations targeting sensitive and irritated skin.

Description: Chamomile flower powder standardized to 7% apigenin is a valuable botanical ingredient known for its strong soothing, regenerative, and anti-inflammatory effects. It is obtained through carefully controlled extraction of Chamomilla recutita flowers, ensuring a defined and stable content of apigenin the main bioactive flavonoid responsible for most of the therapeutic and cosmetic benefits of chamomile. Standardization to 7% apigenin guarantees consistent quality and efficacy, allowing precise formulation of cosmetic products with predictable results. Due to its gentle yet effective activity, this extract is used in a wide range of cosmetic products from creams, lotions, and toners to masks and serums intended for daily skin care. Its purity, stability, and natural golden-yellow hue reflect a high level of processing and preservation of bioactive compounds.

Bioactive Compounds: The chamomile flower extract (Chamomilla recutita) standardized to 7% apigenin contains a rich complex of bioactive phytochemicals that act synergistically, determining its effectiveness in cosmetic and pharmaceutical formulations. Flavonoids form the core of the extract, with apigenin being the dominant and most important standardization marker. Apigenin has potent anti-inflammatory, anti-allergic, and antioxidant properties. It works by inhibiting the release of pro-inflammatory mediators, reducing the sensitivity of nerve endings, and protecting cell membranes from oxidative stress caused by UV radiation and free radicals. This compound simultaneously calms the skin, reduces redness, and accelerates epithelial tissue regeneration, making it the key active molecule of chamomile. In addition to apigenin, the extract contains other flavonoids such as luteolin, quercetin, and isorhamnetin, which enhance the anti-

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oxidant potential and improve skin microcirculation. These compounds help protect against photo-oxidative damage and reinforce the natural skin barrier. The phytocomplex of chamomile also includes terpenoids such as bisabolol and its oxides, farnesene, and matricin, all known for their anti-inflammatory, antimicrobial, and epithelial-repairing effects. During processing, matricin partially converts into azulene, a bluish compound that further contributes to the anti-inflammatory and skin-protective properties. The extract also contains coumarins (herniarin and umbelliferone) with mild antiseptic and soothing properties, as well as phenolic acids primarily chlorogenic, caffeic, and ferulic which play a role in neutralizing free radicals and stabilizing cell membranes. Polysaccharides present in smaller amounts contribute to the moisturizing and softening effects on the skin, while traces of essential oils add a pleasant herbal scent and mild antiseptic action. Thanks to this complex composition, chamomile extract restores, soothes, and protects the skin, while apigenin, as its central bioactive component, defines its anti-inflammatory profile, stability, and antioxidant capacity. This balanced combination of flavonoids, terpenoids, and phenolic compounds makes this extract one of the most important natural raw materials for the care of sensitive, irritated, and dry skin.

Benefits:

- Soothes skin irritations and redness due to the presence of apigenin.
- Acts anti-inflammatory and supports epithelial tissue regeneration.
- Provides antioxidant protection against environmental stressors and UV radiation.
- Reduces sensations of tightness and dryness.
- Improves skin tone and elasticity.
- Suitable for formulations intended for sensitive areas, including the skin around the eyes.
- Promotes a more even and healthy-looking complexion.

Usage: Chamomile flower extract standardized to 7% apigenin is widely used in cosmetic formulations, especially in products designed to soothe and restore sensitive, irritated, or inflamed skin. It is typically used at concentrations ranging from 0.1% to 2%, depending on the product type and desired efficacy. Lower concentrations are suitable for daily care creams and lotions, while higher concentrations are used in reparative and dermocosmetic formulations such as serums, masks, and

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emulgels to achieve more intensive anti-inflammatory and regenerative effects. The extract is usually added below 40 °C to preserve the stability of apigenin and other sensitive flavonoids. It can be successfully combined with hyaluronic acid, panthenol, allantoin, calendula, or green tea extracts to enhance its soothing and protective performance. Thanks to its good solubility in water and compatibility with a wide range of emulsifiers, it integrates easily into emulsion and gel formulations without affecting viscosity or stability. In products for sensitive areas such as the skin around the eyes or redness-prone skin moderate use is recommended to ensure a gentle yet long-lasting effect without irritation. In after-sun care products, balms, and baby cosmetics, it acts as a natural anti-inflammatory and epithelial-repairing agent that restores the skin and prevents dehydration. Due to its stability and purity, this extract has proven highly effective in formulations requiring a high level of biological safety, natural color, and pleasant texture.

Animal Testing: In accordance with EU Regulation (EC) No. 1223/2009 on cosmetic products, this substance has not been tested on animals. The safety assessment is based on available toxicological data, scientific literature, and validated alternative testing methods (in vitro and in silico). In silico refers to testing and evaluation methods performed using computer modeling and simulations rather than live animal (in vivo) or cell culture (in vitro) testing. This statement confirms compliance with the animal testing ban and serves informational purposes for the ingredient's use in cosmetic formulations.

GMO: Non-GMO

Vegan: Contains no animal-derived components.