

TECHNICAL DATA SHEET

Product name: Niacinamide

INCI name: Niacinamide

CAS: 98-92-0

Synonyms: Nicotinamide, 3 Pyridinecarboxamide, 3-Pyridinecarboxamide, Enduramide, Papulex, Vitamin PP

Chemical classification: Amide, Heterocyclic compound

Functional category: Vitamin, Skin and hair care conditioner

Origin of raw material: China

Description: Vitamin B3, also known as niacin or nicotinic acid, is one of the essential B-complex vitamins. There are two main forms of vitamin B3 - nicotinic acid (niacin) and nicotinamide (niacinamide). These forms can be converted into each other in the body. White powder, practically odorless, easily soluble in water and ethanol, soluble in glycerol. Purity 99-100%, pH 6-7.5 (5% aqueous solution).

Benefits:

- **Strengthens the skin's protective barrier:** Niacinamide helps strengthen the skin's natural protective functions. It promotes the production of ceramides, lipids that play a key role in retaining moisture and preventing dryness and sensitivity of the skin.
- **Hydration:** Can improve skin hydration levels by increasing the production of natural moisturizing factors (NMF). This can result in smoother, softer, and more elastic skin.
- **Reduces redness and skin irritation:** Has anti-inflammatory properties. Helps soothe and relieve irritated or red skin. Often used in products intended for people with sensitive skin.
- **Reduces the appearance of pores:** Niacinamide can help reduce the appearance of enlarged pores by regulating sebum (oil) production. Improves skin elasticity. Positively affects acne-prone skin. The effect of a gel with 4% niacinamide in the care of acne-prone skin is comparable to the effects of 1% clindamycin gel (Shalita

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et al., 1995).

- **Evens out skin tone:** Can fade dark spots, hyperpigmentation, and uneven skin tone by inhibiting the transfer of melanin to the skin's surface. This leads to a more even complexion.

- **Anti-Aging effect:** Niacinamide is known for its anti-aging properties. It acts as an inhibitor of melanosome transfer from melanocytes to keratinocytes, leading to improved facial hyperpigmentation. In fibroblast culture, it increases the production of collagen, which in turn leads to increased skin elasticity and reduction of fine lines. Can stimulate the production of collagen and elastin, proteins that keep the skin firm and youthful. Can help reduce the visibility of fine lines and wrinkles,

- **Protection from harmful sun radiation:** Niacinamide can help protect the skin from the harmful effects of ultraviolet (UV) radiation.

- **Increases the effectiveness of other ingredients:** Niacinamide can be used in combination with other skincare ingredients such as antioxidants, hyaluronic acid, and retinol to improve their effectiveness and reduce potential irritation.

- **Excellent tolerability:** Niacinamide is generally well-tolerated by most skin types, including sensitive skin.

Usage: Provides a lighter texture to cosmetic products, making it suitable for use in daily creams. In facial care products, it is commonly used at a concentration of 1% to 6%. It is desirable that the pH of products containing niacin be in the range of 4 to 7, to avoid hydrolysis. Also, it should be avoided to combine Vitamin B3 with ascorbic acid, as well as with salicylic acid due to possible skin irritation reactions.

Raw material from which it is derived: 3-methyl-1,5-diaminopentane.

Obtaining: Niacinamide is obtained synthetically from 3-methyl-1,5-diaminopentane, which is processed into picoline (3-methylpyridine), which is then oxidized and biocatalytically hydrolyzed into niacinamide.

Animal testing: The substance has not been tested on animals

GMO: Non-GMO

Vegan: Does not contain components of animal origin

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