Import and distribution for Serbia: Farmadria DOO
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TECHNICAL DATA SHEET

Product Name: Magnesium Chloride

INCI Name: Magnesium Chloride

CAS: 7786-30-3

Chemical Classification: Inorganic salt

Functional Category: Thickening agent, absorbent, pH adjuster

Description: Magnesium chloride is an inorganic chemical compound and one of the most important magnesium salts. It has the molecular formula $MgCl_2$ and appears as colorless crystals that dissolve well in water. Its density is 2.32 g/cm³, with a melting point of 714°C and a boiling point of 1412°C (1685 K). It typically crystallizes from aqueous solutions as a hexahydrate, $MgCl_2 * 6H_2O$, with a density of 1.57 g/cm³. It is used as a viscosity-increasing agent, absorbent, and pH adjuster in cosmetic products.

Benefits:

- ***Skin Health:*** Magnesium supports the health of skin cells by promoting their normal function and regeneration process. It is essential for the normal functioning of enzymes involved in DNA repair—a process where the body repairs damages to the DNA strand, preserving the integrity of genetic material. Damages can be caused by UV radiation, chemicals, free radicals, genetic mutations, or aging processes.
- ***Sebum Production Regulation:*** Magnesium can affect sebum production, the natural oils of the skin, potentially reducing the occurrence of pimples and acne.
- ***UV Protection:*** UV radiation can cause oxidative stress in the skin, leading to cell damage and the appearance of sunspots. Magnesium helps protect skin cells from oxidative stress, thereby maintaining skin health and beauty.
- ***Soothing Effect:*** Clinical studies have shown that topical application of magnesium can significantly improve skin conditions like diaper rash in children due to its ability to reduce inflammatory processes and soothe irritated skin.
- ***Barrier Function Enhancement:*** Magnesium prevents water loss from the skin and protects it from external factors. A deficiency can lead to skin barrier damage and dry skin, so adding magnesium can help maintain skin health and improve its barrier function.

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Application: The standard use of magnesium chloride in cosmetics is 0.2–1%, depending on formulation needs. In water-based solutions, magnesium chloride poorly penetrates the skin as it cannot pass through skin lipids. It mostly impacts the skin surface, with only a small amount reaching deeper layers. For better skin penetration, specific formulations or techniques like nanoparticles or liposomes are used to enhance the absorption of active ingredients. Magnesium chloride is considered safe for cosmetic use.

Usage: In cosmetics and personal care products, it is used in formulating various products including baby products, bath products, soaps and detergents, body and hand lotions, cleansing products, eye makeup, and hair care products. It enhances cell hydration and keeps the skin radiant.

Obtaining: It is obtained from carnallite. Another method involves heating $MgCl_2 \cdot 6H_2O$ in an atmosphere of gaseous hydrogen chloride. A third method is the reaction of hydrochloric acid with magnesium carbonate, magnesium hydroxide, magnesium oxide, or metallic magnesium.

Animal Testing: The substance is not tested on animals

GMO: Non-GMO

Vegan: Does not contain components of animal origin.