Import and distribution for Serbia: Farmadria DOO
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TECHNICAL DATA SHEET

Product Name: Bentonite Clay

INCI Name: Bentonite

CAS: 1302-78-9

Synonyms: Montmorillonite Clay

Chemical Classification: Inorganic compound

Functional Category: Bulking Agent, Dispersing Agent, Opacifying/Pearlizing Agent, Emulsion Stabilizer, Viscosity Modifier

Description: Bentonite clay is a natural ingredient derived from volcanic ash, rich in the mineral montmorillonite. This mineral has a layered structure with a negative charge, attracting positively charged particles such as toxins and heavy metals. It effectively binds excess sebum and impurities from the skin's surface, providing deep cleansing. When mixed with water, bentonite clay swells significantly, forming a dense paste that adheres readily to the skin. Its soothing effect helps relieve irritation and inflammation, making it ideal for oily, acne-prone skin. Gentle exfoliating properties remove dead skin cells, leaving the complexion smooth and refreshed. In cosmetic formulations, bentonite clay is frequently utilized as a natural thickener and stabilizer, improving texture and facilitating even application. It is popular in facial masks, detoxifying shampoos, and baths due to its deep-cleansing and refreshing qualities. Metal containers and utensils should be avoided, as metal contact may reduce its ion-binding capacity. Additionally, bentonite clay is hypoallergenic, suitable for most skin types, including sensitive skin. It also balances the skin's pH levels, crucial for maintaining healthy skin and preventing dryness, irritation, and susceptibility to infections. Its color ranges from dark grey to greenish-grey, odorless, and insoluble in water.

Mechanism of Action: Bentonite clay, rich in montmorillonite, exhibits high absorption and swelling properties upon contact with water. Its action in cosmetics involves absorbing water and oil, effectively removing excess sebum from the skin and scalp. Its negatively charged surface adsorbs positively charged impurities, including heavy metals and bacterial toxins. The layered structure enables ionic exchange, absorbing harmful ions and releasing beneficial minerals such as magnesium, calcium, and sodium.

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Upon hydration, it forms a gel-like consistency, enhancing viscosity and texture in cosmetic formulations. It also exhibits mild antibacterial activity, neutralizing bacterial toxins, with anti-inflammatory properties beneficial for acne, eczema, and skin irritations. By absorbing sebum, it mattifies the skin, reducing shine, particularly beneficial for oily and combination skin. As a mild exfoliant, it removes dead skin cells and enhances skin tone.

Benefits:

- Effectively extracts toxins and impurities from the skin, leaving it clean and refreshed.
- Absorbs excess sebum, controlling oily shine and mattifying the skin.
- Tightens skin during drying, visually reducing pore size and improving texture.
- Soothes inflammation and irritation, offering relief for conditions like eczema and psoriasis.
- Provides gentle exfoliation, revealing fresher skin layers.
- Detoxifies scalp, removing excess sebum and promoting healthier hair growth.
- Alleviates symptoms from sunburn and insect bites, reducing pain, itching, and inflammation.
- Neutralizes odors and absorbs moisture, suitable for natural deodorants.

Usage Instructions: Bentonite clay's usage and recommended concentrations vary depending on product type. Facial masks typically combine clay with water or other liquids like aloe vera gel or rose water, creating a paste applied to the skin and left until dry, then rinsed off. Recommended facial mask concentrations range from 5% to 15%. For hair care products, bentonite clay detoxifies the scalp, usually at concentrations of 2% to 5%, preventing excessive drying. In soaps and baths, concentrations of 1% to 5% enhance detoxifying properties. For body scrubs and baths, concentrations range from 5% to 10% for thorough yet gentle cleansing. It also functions effectively as a thickener, filler, and binder in skincare and haircare products, stabilizing emulsions synergistically with common thickeners like xanthan gum and hydroxyethyl cellulose (HE cellulose). It suspends pigments effectively, added into the water phase and mixed until fully swollen. External use only.

Formulation Tips: Add to the water phase while stirring. Bentonite is thermally stable, allowing water heating to reduce hydration time. Continue stirring until a smooth,

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thickened, lump-free water phase forms. Clay should be hydrated in pure water without additives.

Natural or Synthetic Ingredient: Bentonite clay is natural, formed by the natural decomposition of volcanic ash rich in montmorillonite. It is mechanically processed for cosmetic application without chemical alteration.

Origin: France

Animal Testing: Not tested on animals

GMO: Non-GMO

Vegan: Contains no animal-derived components