Import and distribution for Serbia: Farmadria DOO
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TECHNICAL DATA SHEET

Product name: Calcium carbonate

INCI name: Calcium carbonate

CAS number: 471-34-1

Synonyms: Limestone; Calcite; Aragonite; Chalk; Marble; Pearl

Chemical classification: Inorganic salt

Functional category: Oral care agent; Bulking agent; Abrasive; Opacifying/Pearlizing agent; pH adjuster (Buffer)

IUPAC name: $CaCO_3$

Description: Calcium carbonate is a colorless, white powder, odorless. However, it can appear in different colors if it contains impurities or traces of other minerals. In crystalline form, it can have different shapes, including calcite (rhombohedral shape), aragonite (prismatic shape), and vaterite (hexagonal shape). The density of calcium carbonate depends on its crystalline form: Calcite - approximately 2.71 g/cm³, Aragonite - approximately 2.93 g/cm³, Vaterite - approximately 2.83 g/cm³. On the Mohs scale of hardness, calcium carbonate has a hardness of 3, which means it is a relatively soft material that can be scratched with a knife or metal object. Calcium carbonate decomposes before reaching its melting point. It decomposes into calcium oxide (CaO) and carbon dioxide (CO_2) at about 825°C. Calcium carbonate is slightly soluble in water (solubility approximately 0.0013 g/100 mL at 25°C). When mixed with water, it forms a precipitate. However, its solubility increases in the presence of carbon dioxide, forming calcium bicarbonate, which is more soluble. Although relatively inert, calcium carbonate reacts with acids, including weaker acids like acetic acid, producing calcium salts, water, and carbon dioxide. This reaction can be used for qualitative testing of the presence of calcium carbonate.

Effects on skin: It is a natural skin modifier. It provides smoothness, reduces the greasy feel and stickiness of the skin. It absorbs sebum, controls skin moisture, and keeps it dry. It gives facial creams a matte appearance. It improves adhesion (face masks). It stimulates the production of antioxidants and shows protective effects on collagen and

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elastin in skin cells. It regulates cellular metabolism. It helps maintain the lipid barrier status of the skin. It protects the skin from infections.

Use in cosmetic products: It is an excellent exfoliant with absorbent properties. It is used in bath products, makeup, personal hygiene products, and shaving products. It is also used as a bulking agent in deodorants. Eggshells are composed of 95% calcium carbonate. Typical concentrations used in cosmetic formulations are from 2 to 5%. For external use only.

Production: Calcium carbonate is obtained in a reaction between calcium hydroxide and carbonic acid.

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

GMO: Not GMO

Vegan: Does not contain animal-derived components.