

Ascorbyl Isostearate

Description

Vitamin C (Ascorbic Acid) is a normal constituent of human skin, and is concentrated in the dermis and epidermis. It is one of the most widely used antioxidants for protecting the skin. Vitamin C can inhibit the activity of tyrosinase and therefore decreases the melanin production. In addition, Vitamin C is important to help protect the skin against UV-induced free radical damage that is related to skin aging. Unfortunately, pure Vitamin C is not stable in cosmetic formulations and easily oxidized when exposed to air or light. To avoid this oxidation process and to provide the maximum benefit of Vitamin C, it is recommended to use a stable form of Vitamin C in personal care preparations.

Ascorbyl Isostearate is an oil resolvable derivative of the Vitamin C derived from condensation reaction of Ascorbic Acid and Stearoyl Chloride. It shows improved solubility and can be dissolved in various oily ingredients with comparative function to Ascorbyl Stearate. Ascorbyl Isostearate penetrates into the skin and there it is metabolized to Ascorbic Acid. Due to this process its efficacy is better than the one of pure Ascorbic Acid. It resists discoloration and degradation, while retaining all biological activity of L-Ascorbic Acid. Besides its superior transdermal delivery and absorption capacity, it shows excellent resistance to acid and heat as well as long-acting stability.

Efficacy

- decreases the generation of melanin by inhibition of tyrosinase activity
- acts as an antioxidant
- decreases wrinkle progression
- improves skin lightening
- improves radiance and an even skin tone
- increases collagen production

Appearance

pale yellow oily liquid

INCI

Ascorbyl Isostearate

Registration

CAS-No.....51222-59-4

EC-No.....610-632-4

Preservatives / Stabilizers

none

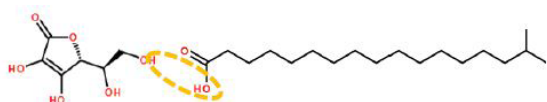


Nature needs no cosmetics,
but cosmetics need nature

Ascorbyl Isostearate

Characteristics

specific gravity (20°C).....0.85 - 0.95
refraction gravity (25°C).....1.450 - 1.460



Molecular formula.....C₂₄H₇₂O₇
Molecular weight.....442.586 g/mol
Synonym:
(2S)-2-[(2R)-3,4-Dihydroxy-5-oxo-2,5-dihydro-2-furanyl]-2-hydroxyethyl 16-methylheptadecanoate

Application

high quality cosmetic products
creams and lotions
face masks
gel and ampoules

Application concentration

skin care formulations.....1 - 10 %

Incorporation

Ascorbyl Isostearate is oil soluble and insoluble in water. Up to 10 % it is soluble at RT in organic solvents as Propylene Glycol, Pentylene Glycol, Sunflower Oil, Avocado Oil, Jojoba Oil, Apricot Kernel Oil, Almond Oil, Propylheptyl Caprylate, Dicaprylyl Ether, Dicaprylyl Carbonate, Isoamyl Laurate, Squalane, Caprylic/Capric Triglycerides, Caprylyl Glycol/Ethylhexylglycerin.

Ascorbyl Isostearate can be incorporated in the oil phase of an emulsion or oil based product. Heating up to 70 - 80°C is possible for a short time.

Toxicology

non hazardous in normal use concentration

Storage & Shelf life

Ascorbyl Isostearate should be stored in sealed containers at a cool, dry and well-ventilated place at 10 - 25°C.

In closed original containers the shelf life is 24 months.