

Vitamin C Value Where Oils Matter

Vitamin C Ester gives formulators a Vitamin C-family antioxidant option for creams, makeup, sunscreen-style formats, and anhydrous systems where water-soluble Vitamin C is not the best fit.



- Oil-soluble Ascorbyl Palmitate for oil-rich formulas

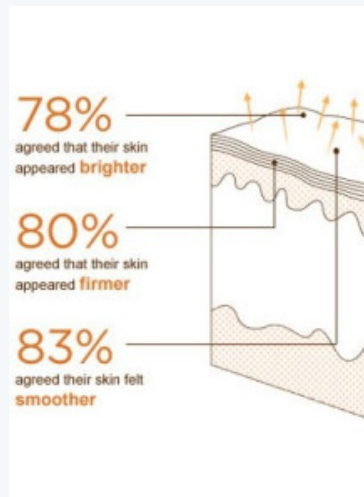
- Built for antioxidant and free-radical defense positioning

- Useful when water-phase Vitamin C systems are difficult

- Best story: oil-phase Vitamin C antioxidant support

An Oil-Soluble Vitamin C Ester

Vitamin C Ester (Ascorbyl Palmitate, Enzymatic) is positioned for formulas that need Vitamin C-family value inside oils, emulsions, anhydrous bases, makeup, and sunscreen-adjacent products.



- INCI: Ascorbyl Palmitate
- Oil-soluble; also soluble in glycols, Ethoxydiglycol, and Ethanol
- Lower exposure to water-phase oxidation than L-Ascorbic Acid
- Enzymatic-grade quality angle for premium positioning

Built for Antioxidant Product Stories

The clearest commercial role is antioxidant-focused skincare and color cosmetic development, not whitening-led positioning.

- Supports free-radical scavenging and daily defense stories

- Fits anti-aging creams, protective day creams, and nourishing lotions

- Adds Vitamin C-family value to primers, foundations, and concealers

- Pairs well with Vitamin E, L-Ascorbic Acid, Protec™ OX, or Protect™ UV

Formula Flexibility Across Oil-Rich Formats

Ascorbyl Palmitate helps formulators extend Vitamin C-family positioning into systems where oil compatibility and emulsion design matter.

- Formats: Cream, Lotion, Foundation, Primer, Sun Screen, Concealer, Eye Shadow, Brush-on

- Also listed for Clear Gel, Toner, and Mask when formulation design allows

- Solubility data: 0.03-0.12% in natural oil, 0.48% in Propylene glycol, 12.5% in Ethyl Alcohol

- Suitable for olive oil and alcohol systems

A Smart Choice Among Vitamin C Options

For customers comparing Vitamin C derivatives, this ingredient is best positioned as the oil-soluble antioxidant ester for oil formulations.

- Compared with L-Ascorbic Acid: lower water-phase oxidation exposure, but less broad performance in other areas
- Compared with MAP, SAP, AA2G™, and Ethyl Ascorbic Acid: oil-soluble rather than water-soluble
- Compared with Perfect-C™: positioned specifically for antioxidant use in oil formulations
- Related option: ActiveRelease™ Ester-C for water-dispersible ascorbyl palmitate needs

Direct Proof for Free-Radical Defense

Direct Ascorbyl Palmitate papers support the antioxidant and UV-stress-related free-radical defense story that fits this ingredient best.

- Supports antioxidant photoprotective positioning by showing microemulsion-delivered ascorbyl palmitate reduced UV-induced free radical formation in skin. Citation: Jurkovič P, Šentjerc M, Gašperlin M, Kristl J, Pečar S.
- Supports antioxidant Vitamin C derivative positioning by comparing ascorbyl palmitate with sodium ascorbyl phosphate for scavenging UV-induced free radicals in skin. Citation: Jurkovič P, Šentjerc M, Kristl J, Pečar S, Gašperlin M.
- Supports delivery-focused topical concepts by showing liposomal hydrogel/lipogel systems enhanced skin permeation of ascorbyl palmitate. Citation: Lee S, Lee J, Choi YW.

Vitamin C–Family Support Builds the Story

Broader Vitamin C skin–health literature helps frame the ingredient family story around antioxidant defense, photoprotection, anti–photoaging, and collagen–related skin support.

- Supports broader Vitamin C–family positioning by reviewing topical Vitamin C mechanisms including antioxidant activity, photoprotection, collagen synthesis, anti–photoaging, and depigmenting mechanisms. Citation: Al–Niaimi F, Chiang NYZ.
- Supports anti–aging, antioxidant, and skin–health storytelling by describing Vitamin C involvement in collagen synthesis, antioxidant defense, and photoprotection in skin. Citation: Pullar JM, Carr AC, Visser MCM.

Launch Concepts Customers Can Build

The ingredient fits product concepts where oil-phase compatibility, antioxidant storytelling, and Vitamin C-family recognition can work together.

- Oil-Phase Vitamin C Antioxidant Cream with Vitamin E and antioxidant protection system
- Vitamin C + Vitamin E Protective Day Lotion for daily environmental protection positioning
- Anhydrous Vitamin C Treatment Balm or treatment stick
- Antioxidant Makeup Primer, Foundation, or Concealer
- Sunscreen-adjacent antioxidant support cream, primer, or foundation



Practical Use Guidance Reduces Adoption Friction

The product is straightforward to position, but formulation success depends on matching its oil-soluble nature and managing heat, phase, and compatibility.

- Use level: 0.10–8.00%; recommended dosage: 8.00%

- Add at the last step; low-temperature incorporation is preferred when possible

- Avoid temperature above 40°C and heat above 60°C

- Oil-phase mixing at 70°C is noted for easier mixing, creating a heat-management tradeoff

- Do not use with Vitamin B3; avoid sunlight when using

Choose It for Oil-Phase Antioxidant Vitamin C

Vitamin C Ester is the practical choice when the product brief needs Vitamin C-family recognition, antioxidant positioning, and compatibility with oil-rich or makeup-style formats.

- Best fit: oil-soluble antioxidant Vitamin C ester positioning
- Strongest claims story: free-radical defense, daily protection, and anti-aging support
- Formulation fit: creams, lotions, anhydrous systems, primers, foundations, concealers, and sunscreen-style products
- Commercial advantage: Vitamin C-family value without relying only on water-soluble derivatives
- System strategy: combine with Vitamin E, L-Ascorbic Acid, Protec™ OX, or Protect™ UV for antioxidant system design