HALLSTAR® C1215
ALKYL BENZOATE NATURAL

A unique, natural version of the common emollient, solubilizer, wetting agent and UV filter solvent

HALLSTAR
BEAUTY

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C12-15 Alkyl Benzoate has been available in the market and used in cosmetic products for over 100 years. During that time, market products have all been produced using synthetic alcohols and benzoic acid. Hallstar Beauty has produced a natural version of the ingredient, conforming to the ISO 16128 Natural Standard. HallStar® C1215 Alkyl Benzoate Natural is a unique emollient ester derived from benzoic acid and natural mid-chain alcohols. It is non-oily, non-sensitizing, non-comedogenic and stable over a broad pH range. The ingredient is commonly used as an anti-tacking agent, emollient, solubilizer, and solvent for UV filters and other lipophilic active ingredients, as well as a wetting agent for dry powders and pigments.

NEW INGREDIENT, SAME INCI

HallStar® C1215 Alkyl Benzoate Natural is engineered to meet the same performance expectations as the market's synthetic versions while increasing products' natural index, especially sunscreens with organic filters. Because it retains the same INCI designation and CAS Number, this new ingredient can accelerate brands' product development requirements, saving time and costs.

TECHNICAL DATA

- INCI: C12-15 Alkyl Benzoate
- CAS #: 68411-27-8 [C12-15 Alkyl esters]
- Recommended usage level: 1% to 30%
- Patent application filed
- Required HLB: ~12

TYPICAL PROPERTIES

- Appearance: clear, thin liquid
- Odor: very mild or odorless
- Acid value mg KOH/g: <0.5
- Saponification value: ~184
- Viscosity @ 25 oC: <50 cP
- Specific gravity @25 oC: ~0.93
- Hydroxyl value: 8.0 maximum
- Free moisture %: <0.5
- Dielectric constant: 3.85
- ISO 16128 natural index: >60%

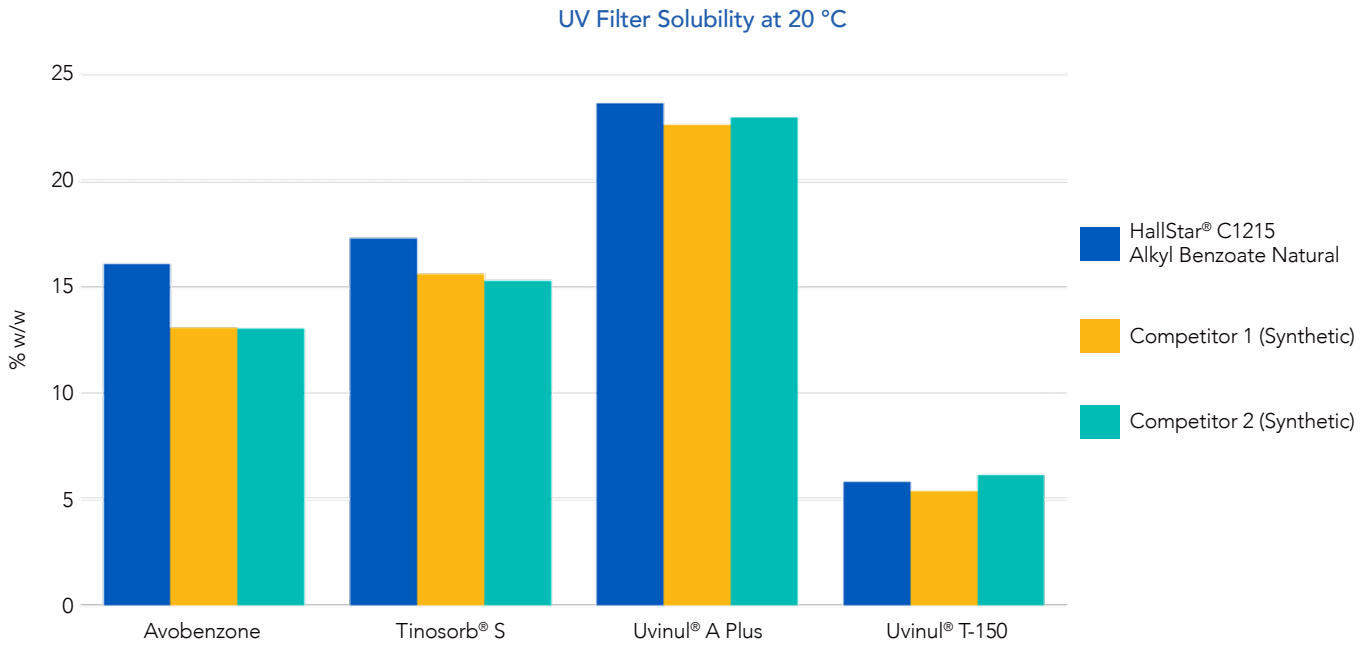
APPLICATIONS

- Sun care creams, lotions, oils and sprays
- Skin care creams, lotions and oils
- Hair conditioners and conditioning shampoos
- Hair styling products
- Baby care
- Antiperspirants and deodorants
- Bath and massage oils
- Hydrating body washes
- Decorative cosmetics
- Foundations and tinted moisturizers
- Shaving products

Hallstar produces HallStar® C1215 Alkyl Benzoate Natural at our high capacity manufacturing facility in Greensboro, North Carolina.

UV FILTER SOLUBILITY

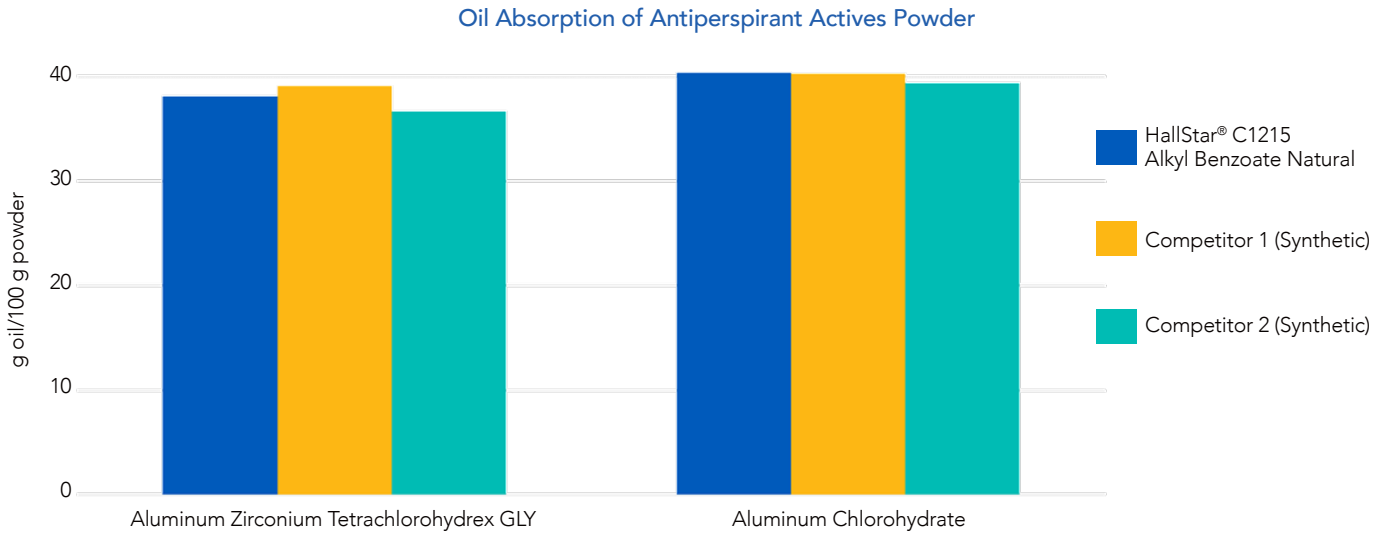
HallStar® C1215 Alkyl Benzoate Natural exhibited similar solvency across common UV filters compared to synthetic products on the market.



USP <1236> Solubility Measurements, following the Saturation Shake-Flask method, 24 hours at 20 °C

OIL ABSORPTION

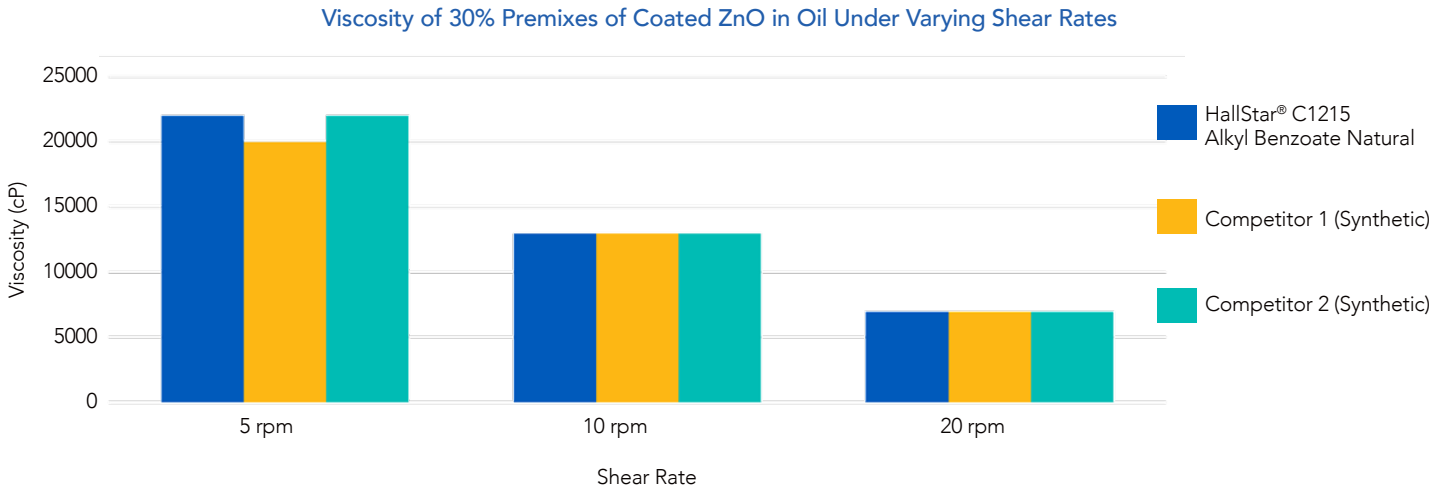
HallStar® C1215 Alkyl Benzoate Natural oil absorption properties of common antiperspirant actives were shown to be comparable to competitive synthetic products.



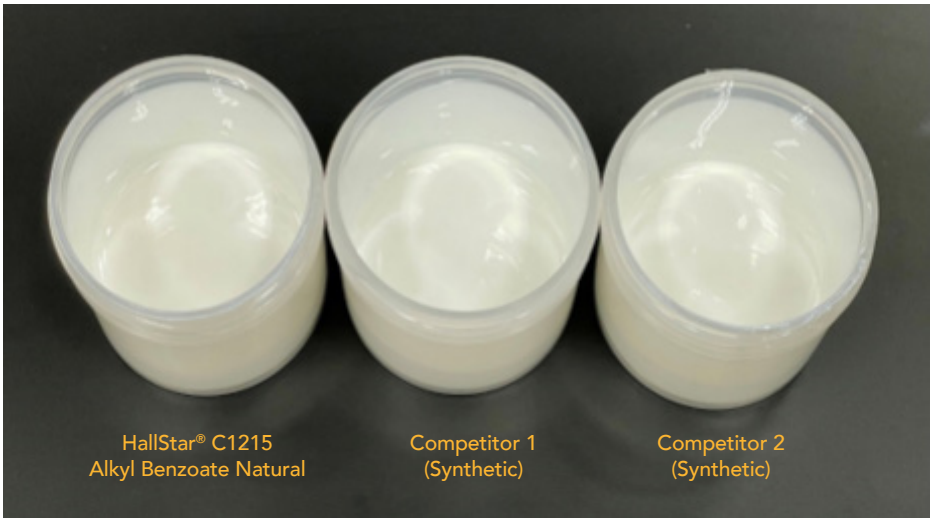
Adapted from ASTM D281 – 95 Standard Test Method for Oil Absorption of Pigments by Spatula Rub-out

PIGMENT WETTING FOR COATED ZINC OXIDE

HallStar® C1215 Alkyl Benzoate Natural exhibits equivalent pigment wetting properties to competitor materials. All three premixes show virtually identical viscosities across different shear rates, which also indicates similar flow properties.



Zinc Oxide Coating: Triethoxycaprylylsilane; Mixing Procedure: FlackTek SpeedMixer® 3 x 2 minutes @ 2500 rpm



Visual appearance of premixes represents complete wetting of 30% zinc oxide, indicated by the high level of shine, smoothness and absence of visible grains.

Viscosity: Brookfield DV II, T-F, 25°C, cP

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