



Applechem Launches S-Block DZ 100 PDCC

A New Zinc Oxide Dispersion Designed For Clean Clinical Brands

S-Block DZ 100 PDCC is a new zinc oxide dispersion designed to meet growing consumer demand for multi-functional sun care products that combine clinically-validated claims with cleaner ingredients. The intersection between clean beauty and clinical treatment has created new product design problems that traditional silicone-based dispersions weren't intended to solve. These dispersions suffer from incompatibilities with natural esters and hydrocarbons, product fit issues due to clean consumer behavior shifting away from siloxanes, and poor ingredient stability due to zinc oxide settlement.

"There has been a lack of innovation in this market segment," says Samuel Lin, Managing Director of Applechem. "Suppliers have been treating silicone-based zinc oxide dispersions as a simple blend, without creating improvements to meet the high level performance demands required for clinical sun care products. Formulators now are feeling handcuffed to older technologies that do not provide the flexibility needed to adapt to modern sun care trends."

S-Block addresses these issues by giving formulators the ability to add consistent broad spectrum mineral SPF protection while moving freely between high performance silicone-based, hydrocarbon-based and clean beauty compliant emulsion and anhydrous systems. This makes S-Block a great fit for a wider range of sun care applications that need medical grade performance with brand-specific ingredient requirements. It features:

- **"Sensory"- Block Boost**

Creates a unique, powdery smooth feeling during rub-in. Excellent sensorial enhancer, reducing dry-down, helps detackify formulations without requiring additional silicone powder.

- **Formulation Flexibility with Clean Ingredients**

Compatible with all emulsion and anhydrous systems. Suitable for Clean at Sephora, Conscious Beauty at Ulta, and Credo Clean.

- **Clinical Grade Broad Spectrum Protection**

Meets the FDA broad spectrum labeling requirements as well as EU COLIPA (UVAPF/SPF = 0.46) and Japanese PF standards (PA ++++).

- **Excellent Active Loading + Stress-Free Stability**

High zinc oxide active concentration (78%) while still retaining an easy-to-disperse viscosity profile. No separation or settlement, resulting in consistent SPF and critical wavelength from batch to batch.

Applechem's expertise in polymer science and chemical engineering allow them to customize the architecture of natural polymeric dispersants and in-situ coating systems, which creates more control over the density and distribution of zinc oxide aggregates as well as the dispersion stability profile. This leads to the development of more concentrated, stable products that resolve traditional formulation issues linked to poor dispersions.

"The industry expectations for a new Applechem mineral sunscreen dispersion are quite lofty considering the overwhelming popularity of our flagship G-Block product line. Those expectations have been met and exceeded with S-Block thanks to years of development through pandemic conditions by our talented R&D team," remarks Kyle Gormley, Sales Manager. "I am truly grateful for their efforts and look forward to sharing the fruits of their labor with our customers, distributors, and collaborative partners globally."

Yung Chan, Applechem's Product Leader for S-Block also adds, "There is a lot of multi-functionality built into this dispersion, but I am most proud of the unique sensory benefits - smooth, non-tackifying, and powdery. We've developed some very stable sun care prototypes to illustrate these benefits to our customers."



S-Block DZ 100 PDCC will be launching at 2022 NYSCC Supplier's Day at the Jacobs Javits Center in New York City. Interested parties can request samples at www.applechem.com/request-sample in the weeks leading up to this event, and the Applechem technical team will be on-site to provide formulation and regulatory support.



About Applechem

Applechem is a cosmetic technology supplier with a diverse range of specialty ingredient solutions for cosmetics, personal care, and sun care formulations. These ingredients are designed around the belief that products should be functionally consistent, easy to use in both the lab and manufacturing, and innovative enough to create new possibilities for cosmetic formulators.

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