

Information Sheet

Veova[™] 10 Vinyl Ester

Reduced Biocide Leaching



Biocides & Fungicides for Exterior Paints

Demand for reduced biocide leaching

Biocidal products are commonly used in paint formulations to control microbial growth and to provide protection in the dry paint against fungi and algae. The biocide and fungicide substances are prone to leach-out over time upon aging and weathering. This jeopardizes long-term dry film protection and can affect durability and aesthetics. Technologies to control and reduce biocide leach-out improve dry film preservation and minimize release to the environment.

Veova / Acrylic Binders

Veova vinyl ester/acrylics for long-term durability

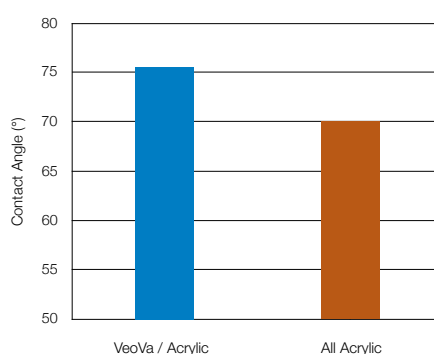
Veova 10 vinyl ester is a monomer with a unique hydrophobic bulky structure. Veova monomers readily copolymerize in emulsion with acrylates to yield polymers that are especially suitable for high performance decorative coatings. Veova monomers significantly upgrade key performance properties leading to long term durability.

Hydrophobicity and Water Resistance

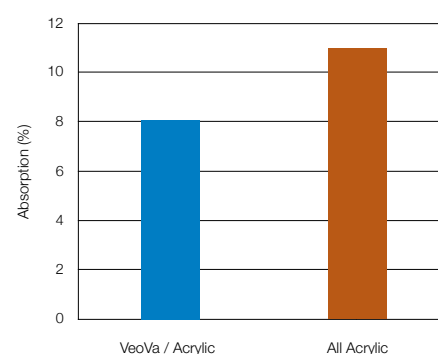
Veova vinyl ester enhances hydrophobicity and barrier protection

Veova vinyl ester increases the hydrophobicity of acrylic polymers. The incorporation of Veova 10 monomer into the polymer backbone has a long-lasting positive impact on the water contact angle and hence water repellency of the polymer. Veova / Acrylic binders have superior water barrier properties and decreased water uptake.

Contact angle of polymer film



Water absorption of polymer film

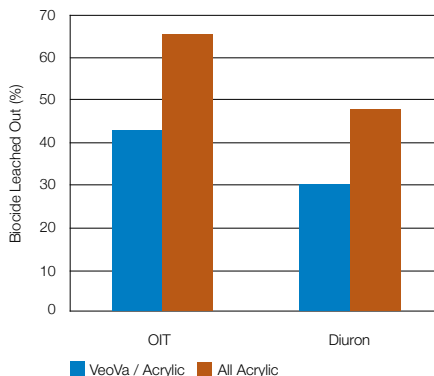


Low Biocide Leaching for Longer Dry Film Protection

Reduction of water driven leaching of biocides and fungicides

The high hydrophobicity of VeoVa / Acrylic binders minimizes leach-out of active materials such as surfactants, additives and biocides. Leach-out testing of 42% PVC exterior paints containing commonly used fungicides and algacides confirm the superior performance of VeoVa / Acrylic based coatings versus all-acrylic countertypes. VeoVa / Acrylic based paints have a significantly reduced leach-out of both Diuron (3-(3,4-dichlorophenyl)-1,1-dimethylurea) and OIT (2-Octyl-2H-isothiazol-3-one) biocides after prolonged immersion in water. This leads to better and longer dry film protection and hence increases overall service-life and aesthetics.

Leaching rate of biocides after 96 hours immersion in water



Summary

Highly hydrophobic VeoVa vinyl ester monomers impart excellent water resistance, water repellent and barrier properties when incorporated into acrylic polymers. The high water resistance of VeoVa / Acrylic binders significantly reduces the leaching out of dry film preservatives. This enables the formulation of paints with long-term fungi and algae resistance, increased dirt streaking and rain mark resistance and a superior durability.

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