VeoVa™ 10 Vinyl Ester
Superior Durability For Exterior Paints

Super Durable
VeoVa/Acrylics

VeoVa vinyl ester/acrylics for superior durability
VeoVa vinyl ester can be polymerized with acrylates and methacrylates to produce superdurable emulsions. VeoVa/acrylic emulsions (VeoCryls) enable paint formulations for exterior wall applications with outstanding water resistance and enhanced durability. Starting formulations can be obtained upon request.

Key Properties

VeoCryl characteristics for exterior performance
- Water repellency
- Reduced water absorption
- Alkali resistance
- Outdoor durability
- Improved adhesion to various substrates

Hydrophobicity and Water Resistance

VeoVa vinyl ester increases the hydrophobicity of VeoCryl polymers. In a water immersion test of clear polymer films on glass, VeoCryl emulsions show less whitening than all-acrylic systems, formulated with a similar surfactant package.

Water whitening of the clear latex film after 7 days immersion

Superior Outdoor Exposure Performance: Dirt Pick-Up

VeoCryl-based paints show superior dirt pick-up resistance (DPUR) compared to paints formulated with vinyl acetate/VeoVa (VA/VV) copolymers and other commercial benchmarks in a natural weathering exposure test that was performed over a number of months in Shanghai and Manila.

Shanghai

Manila
Because of its low water absorption and high water repellency, VeoCryl minimizes rainwater marks and dirt streaks on vertical structures. This can be seen on the pictures below where commercial benchmark emulsions and paints are compared with a VeoCryl in an exposure test of up to 26 months in Shanghai.

VeoCryl | Commercial styrene/acrylic | Commercial all acrylic | Commercial SEA exterior paint

**Summary**

VeoVa vinyl ester can be polymerized with acrylates and methacrylates to produce VeoCryls for use in exterior applications. The Hexion Versatics team determined an optimum VeoVa monomer content at which VeoCryl technology provides exceptional performance surpassing “acrylic only” binders. It is most suitable for exterior paint formulations that provide superior alkali and efflorescence resistance, excellent dirt pick-up resistance and resistance to rain marks and dirt streaks. The below chart shows a relative ranking of systems tested.

![Chart showing comparison of water absorption, yellowing, low exudation, chalking resistance, and alkali resistance for VeoCryl, all acrylics, styrene-acrylics, and DPUR systems.](chart.png)