ROVACE™ 661  Vinyl/Acrylic Copolymer Emulsion

Description

ROVACE 661 vinyl-acrylic emulsion is based on a high molecular weight film forming resin of controlled particle size designed primarily as a binder for use in latex paints. It has a long history of proven performance in the paint and coatings industry. The versatility of this binder provides the paint formulator with an opportunity to develop a variety of interior coatings. Excellent performance properties can be obtained with paints based on ROVACE 661 copolymer emulsion at high, medium and low PVC levels.

Benefits

- Excellent versatility
- Very good consistency
- Good scrub resistance
- Very good cold temperature touch-up
- Low residual monomers
- Economical formulations

Typical Physical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solids Content % by weight</td>
<td>55</td>
</tr>
<tr>
<td>Brookfield Viscosity (25°C, cp)</td>
<td>900</td>
</tr>
<tr>
<td>Emulsifying System</td>
<td>Nonionic</td>
</tr>
<tr>
<td>Wet Density, lb./U.S. gal., @ 25°C</td>
<td>9.0</td>
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<tr>
<td>Wet Density, kg/L</td>
<td>1.08</td>
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<tr>
<td>Dry Bulking Value, U.S. gal./lb.</td>
<td>0.105</td>
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<tr>
<td>Wet Bulking Value</td>
<td>0.114</td>
</tr>
<tr>
<td>pH</td>
<td>4.75</td>
</tr>
<tr>
<td>Average particle size, microns</td>
<td>0.3</td>
</tr>
<tr>
<td>Visual Minimum Film Forming Temp.</td>
<td>5°C</td>
</tr>
</tbody>
</table>

Performance

Coatings formulated with ROVACE 661 vinyl-acrylic copolymer emulsion exhibit outstanding properties in the important performance areas of drying, scrub resistance, hiding, colorant acceptance, color retention, sealing efficiency, hold-out, freeze-thaw resistance, water resistance, package stability, and overall appearance and application. Finished products such as primer sealers, flat wall paints and semigloss enamels can be developed in both premium and low cost quality ranges.

ROVACE 661 vinyl-acrylic copolymer emulsion was designed primarily for use in interior latex paints. Rohm and Haas recommends using a RHOPLEX™ 100% acrylic emulsion binder for best performance in quality exterior applications, for both wood and masonry. Based on our experience, ROVACE vinyl-acrylic emulsions offer similar exterior performance to other commercially available vinyl-acrylic emulsions. When formulating with vinyl-acrylic emulsions for exterior applications, we recommend exposure studies to verify performance prior to commercial introduction.

Formulating

ROVACE 661 copolymer emulsion is designed to perform in paint formulations which are optimized for vinyl-acrylic emulsions. When substituting for an existing binder, the formulator should make a solid-on-solid replacement of ROVACE 661 emulsion copolymer for the current binder and evaluate performance.
COALESCENT

ROVACE 661 copolymer emulsion requires a coalescing agent to achieve optimal film properties. Concentrations will vary with formulation variables such as PVC and Volume Solids. Texanol is recommended at a level of 6 to 9% on polymer solids for most applications.

THICKENERS/RHEOLOGY MODIFIERS

Both cellulosic and rheology modifiers can be used with ROVACE 661. If additional flow and/or film build is desired, then ACRYSOL™ rheology modifiers should be evaluated. However, care should be taken to evaluate the impact that these additives will have on water sensitivity and adhesion. A HASE type such as ACRYSOL TT-935, and HEURs such as SCT-275 and ACRYSOL RM-825 are recommended.

DEFoAMER

Both silicone-free and silicone-containing defoamers are effective with ROVACE 661. Recommended defoamers include: Colloid 640, Colloid 643, Colloid 681F, Nopco NDW, Foamaster 111, DEE Fo 97-2, and Drew L-475.

DISPERsANT

ROVACE 661 has been successfully formulated with TAMOL™ 731A, TAMOL 850 and TAMOL 963 to achieve maximum hiding, flow and stability.

SURFACTANTs

Surfactants are a very important part of good pigment wetting, color acceptance, and wetting of the substrate. The following surfactants work well with ROVACE 661: Triton N-57, Triton N-101, Triton GR-5M, Triton X-100, Tergitol NP-9, Igepal CO-610, Igepal CO-630, and Igepal CTA-639.

FREEZE-THaW/WET EDGE CONTROL

Ethylene and propylene glycol are added to improve stability and give wet edge. In semigloss paints, propylene glycol is preferred because it promotes better drying characteristics at the level necessary for good wet edge.

SAFE HANDLING INFORMATION

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