

High-Performance Pigment Dispersant & Wetting Agent



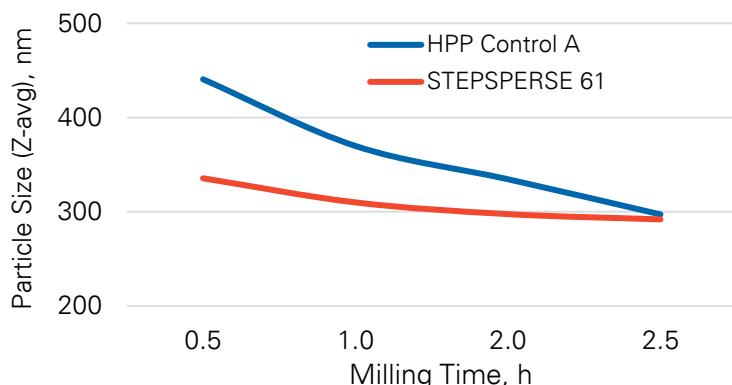
STEPSPERSE® 61 for Architectural Colorants

STEPSPERSE 61 is a novel, VOC-free, high-performance polymeric (HPP) dispersant designed for a wide variety of carbon blacks and organic pigments in waterborne applications. This technology outperforms leading commercial dispersants in milling efficiency, dispersion stability, resin compatibility and color development. STEPSPERSE 61 offers consistent performance with different commercial paints, making it a versatile and convenient product for the preparation of pigment dispersions. In addition, STEPSPERSE 61 is multifunctional, because no wetting agents or other auxiliary ingredients are needed, enabling formulators to simplify their colorant line.

Milling Efficiency

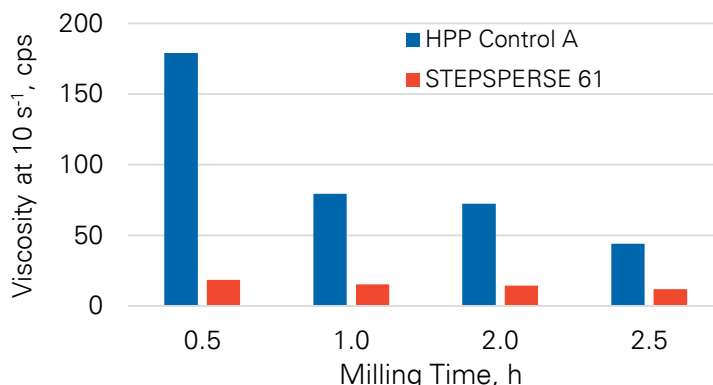
STEPSPERSE 61 exhibits improved performance in pigment milling when compared with a commercial HPP control, providing faster reduction in particle size with a consistently lower dispersion viscosity (Figures 1 and 2). The dramatic difference in particle size at the start of the process suggests superior wetting with STEPSPERSE 61.

Figure 1. Pigment Milling: Particle Size



Red tint: 40% PV-19 with 5% STEPSPERSE 61 SOP¹

Figure 2. Pigment Milling: Viscosity

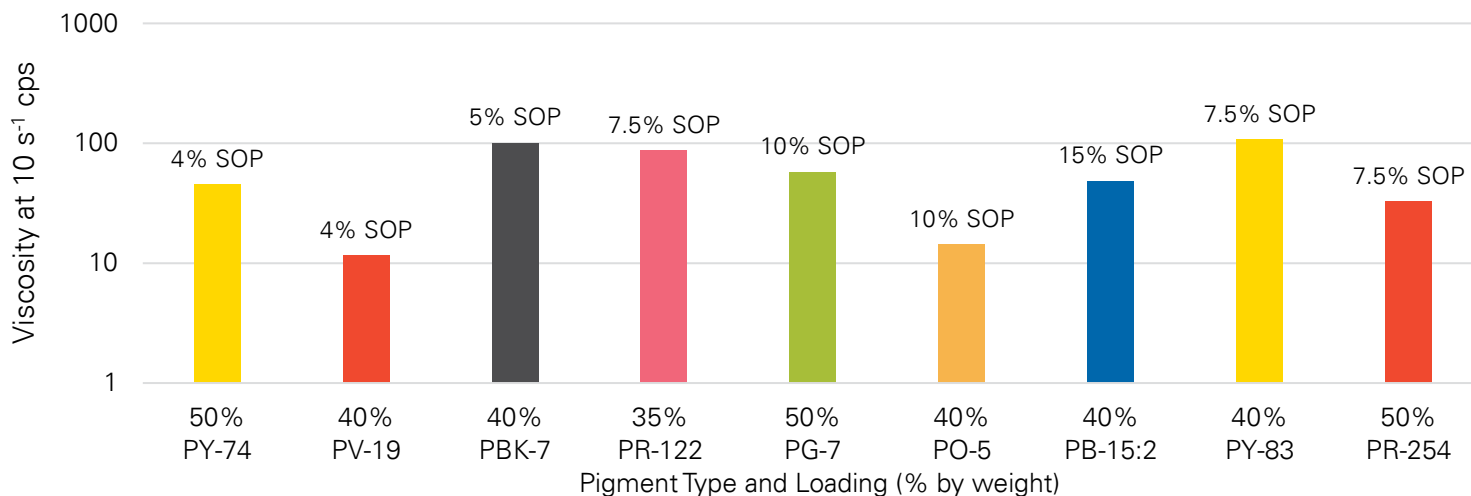


Red tint: 40% PV-19 with 5% STEPSPERSE 61 SOP

Versatility with Multiple Pigments

The unique design of STEPSPERSE 61 enables it to create a broad array of different colorants. Good dispersions can be generated with a wide variety of organic and carbon black pigments (Figure 3).

Figure 3. Pigment Versatility



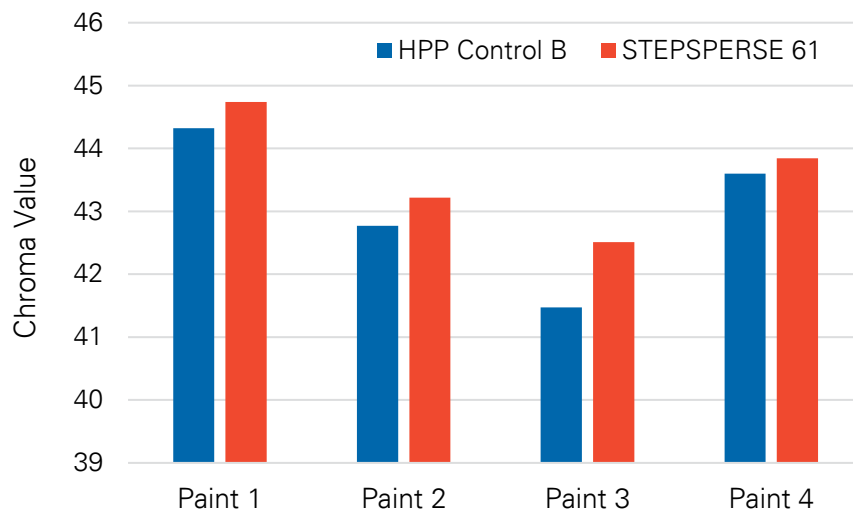
Viscosity measured at shear rate of 10 s⁻¹.

¹ SOP: Solids on weight of pigment = mass of dispersant used/mass of pigment used x 100%

Compatibility with Architectural Paints

Colorants made with Stepan's new HPP dispersant show excellent compatibility with latex paints. Using magenta PR-122 dispersions as an example, STEPSPERSE 61 showed superior chroma values when tinting paints from four different store brands (Figure 4). In addition, STEPSPERSE 61 does not typically diminish properties of the final paint, such as Krebs units (KU) viscosity, block resistance or hardness.

Figure 4. Reliable Performance

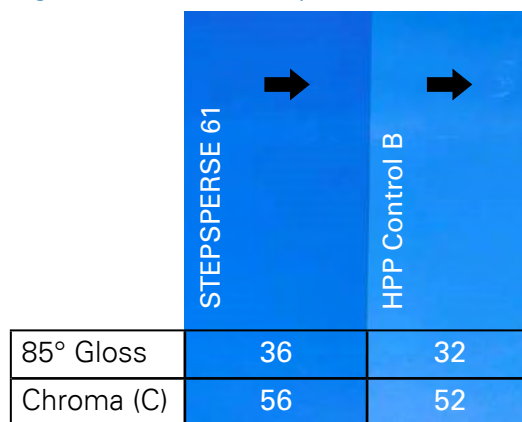


Magenta tint: 35% PR-122 at optimum dispersant SOP Tinting of paint at 1:16 ratio.

Color Development

STEPSPERSE 61 has the potential to boost performance in high-end colorants. For instance, both STEPSPERSE 61 and a commercial HPP control show good performance with PB-15:2 pigment, as evidenced by minimal delta E after rubup. Still, STEPSPERSE 61 achieved better gloss and chroma values than the control (Figure 5).

Figure 5. Color Development and Gloss



Blue tint: 40% PB-15:2 at optimum dispersant SOP. Tinting of stain paint at 1:16 ratio. Arrows indicate location of rub up.

For more information visit go.stepan.com/CASEAdditives or [contact us](#).