

Abstract Submitted
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Controlling Morphology in Coatings Made from Polyolefin Dispersions JODI MECCA, JEFFREY WILBUR, RICK LUNDGARD, Formulation Science, The Dow Chemical Company, SEAN TANG, BERNHARD KAINZ, Dow Coating Materials — Semi-crystalline polymers have excellent mechanical properties, thermal stability, and chemical resistance that would be attractive for coating applications, but those same properties make it impractical to efficiently deposit these materials using solvent-based or 100% solid approaches. Instead, aqueous formulations have been developed based on polyolefins dispersed as micron-scale particles. The macroscopic properties of coatings made from these materials are strongly dependent on coating morphology, which in turn is governed by the interactions between component polymers, the curing chemistry and the curing process. We will discuss thermodynamic and kinetic approaches to control the morphology and macroscopic properties of coatings based on polyolefins.

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