Crosslinking at Ambient Temperature

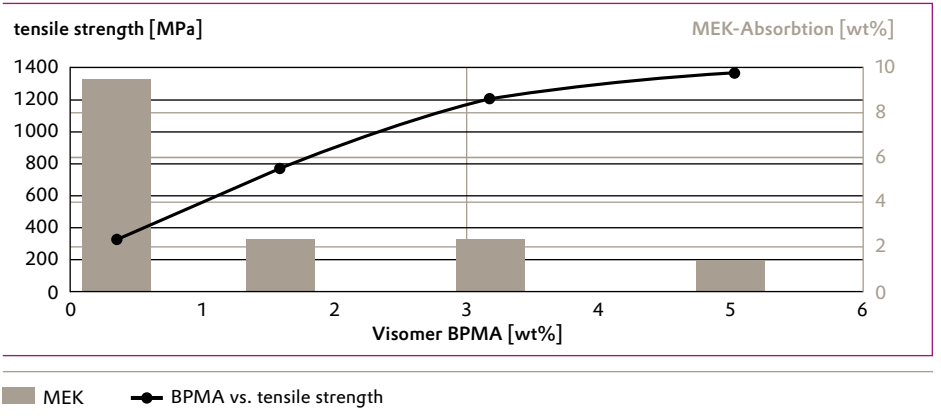
New aqueous crosslinking systems can make a significant contribution to complying with the increasingly stringent VOC directives.

Methacrylate systems that enable crosslinking of aqueous binder systems at room temperature allow the user to adjust the final properties of the coating after application by post-crosslinking. At the same time, the user can exploit the advantages of a non-crosslinked, readily film-forming emulsion system for the application. Crosslinking is initiated by light, oxidation or reaction with a condensation partner, depending on the chosen monomer. The light-reactive methacrylate VISIOMER® BPMA based on a benzophenone methacrylate is crosslinked by means of a small dose of UV radiation, i. e. the UV proportion of daylight is sufficient to enable crosslinking. Acrylic resins manufactured with oxidatively crosslinking VISIOMER® MUMA monomers show comparable film properties and offer the added benefit of good compatibility with alkyd resins, i. e. a combination of acrylic and alkyd resins unites the advantages of both systems. VISIOMER® ALMA, a methacrylate system that crosslinks by condensation, makes it possible to obtain durable, high-gloss coatings even when incorporated in small quantities.

The advantage of polymers containing the described reactive methacrylates is therefore the ability to adjust a low minimum film-forming temperature while still obtaining very hard films with good mechanical properties and excellent resistance to commonly used chemicals.

VISIOMER® BPMA will be commercially available from the first quarter of 2009, VISIOMER® MUMA from the third quarter of 2009.

Solvent Absorption and Tensile Strength Values as a Function of VISIOMER® BPMA Content



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