

Abstract

Necowel 790 - A new waterborne polyester polyol for 2K PU-coatings

Waterborne coatings are gaining market share for decades and replace solventborne alternatives with success. In case of 2K polyurethane coatings a potential side reaction of the isocyanate hardener with water is still a challenge and the potential CO₂ formation limits the resulting maximum coating thickness especially for industrial applications. In addition, EHS classifications of those systems become more and more challenging from year to year. With Necowel 790, a new waterborne polyester polyol, curable with isocyanate hardeners is available without any harmful substances and adjusted open time that ensures a blistering limit up to 100 µm in one step. Curing time, hardness development, chemical resistance and high gloss are comparable to waterborne alternatives available on the market. The use of Necowel 790 as polyester polyol emulsion offers therefore a new path for environmentally friendly 2K polyurethane coatings especially for ACE-applications.