DEVELOPING A SUSTAINABLE SOLUTION FOR SCRATCH AND MAR RESISTANCE IN VOC COMPLIANT AUTOMOTIVE CLEARCOATS

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Automotive coatings have witnessed a definite transition to greener technologies over the past decade. Increased focus on solvent emissions and greenhouse gases has resulted in the need for developing solutions that can meet the twin goals of performance and regulatory compliance. This paper focuses on the impact of a new class of performance additives that offer scratch and mar resistance properties in VOC compliant refinish clearcoats. Mechanical properties (hardness, modulus and creep) together with scratch resistance were measured at various time periods after deposition of the coatings. Such properties were then correlated with chemical changes in the coatings. It is shown that indentation and scratch testing, coupled with suitable imaging techniques, provide a wealth of information about coating changes within the first 3 weeks after deposition.

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