

Incorporation of pre-dispersed UV-stabilizers in waterborne coatings

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This paper is dedicated to paint formulators of high quality waterborne coatings for both indoor and outdoor uses. As an introduction, we explain the different ways of introducing pre-dispersed hydrophobic UV-stabilizers into waterborne coatings. Taking into account the characteristics of crystalline, liquid or diluted UV-stabilizers, we state on the most important risks and opportunities.

The objective of the study is to determine the key parameters influencing the stability of waterborne systems, in order to provide a safe and easy handling of these aqueous additive dispersions. Important formulation features, requested specifications are worked out and discussed in details.

Finally, exposure test results are compared between various waterborne coatings, stabilized with traditional UV-stabilizers versus UV-stabilizer dispersions. As a result, it is showed that pre-dispersed UV-stabilizers allow a much easier and safer handling of paint production, while keeping the same level of stabilization achieved with traditional additives.