



EVONIK
INDUSTRIES

Additives

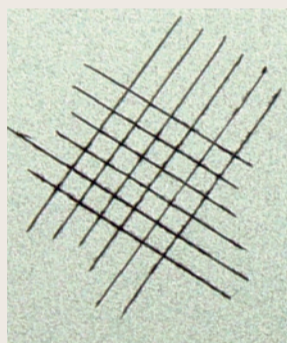
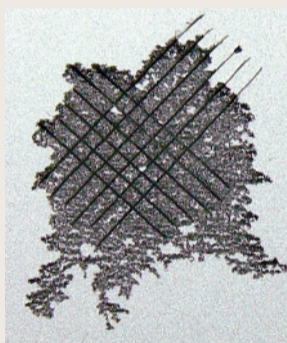
Insufficient Adhesion on Various Substrates?

Specialty Resins Enable Coatings Formulator to Fulfill Customer Needs!

Specialty Resins can improve adhesion of various water- and solventborne coatings. It depends on the coating system which Specialty Resin is the most successful. Generally adhesion improvement could be achieved on substrates by the use of Specialty Resins like: ABS, PC, PS, PA, Noryl, aluminum, untreated and zinc-plated (galvanized surfaces) steel and additionally glass.

Customers are constantly requiring ongoing improvement in the final properties of coatings. Especially industrial coatings for high quality application with protective function or value-added effect need to have optimum adhesion in addition to a lot of other important properties. This challenge does not get easier for the coating formulator due to the increasing variety of substrates in use by coatings customers.

Have you ever experienced loss of adhesion even though you did your best in advance?



Therefore, Specialty Resins offer special properties, like adhesion.

Specialty Resins are divided in two groups: Synthetic Resins based on ketone aldehyde chemistry and Adhesion Resins based on special modified polyesters. Both product groups, depending on the formulation and substrates, are significantly effective to improve adhesion of water- and solventborne coatings.

Examples

Synthetic Resin DS 50, solvent-free aqueous PU dispersion, shows significant adhesion improvement in waterborne plastic coatings. The tested coatings were based on pure acrylate, styrene acrylic and acrylic polyurethane dispersions and emulsions. By the use of 10 – 20 % resin (solid on solid) perfect adhesion was achieved on ABS, PS and PA.

Adhesion Resin 2440, a special purpose polyester with 60 % solids content – additionally complies to FDA Regulation 21 CFR 175.300 and 175.105 – performed perfectly in cross cut tests after 1000h of salt spray testing. The coatings were based on solventborne 2-pack PU and self-crosslinking acrylate. Additionally adhesion on ABS could be improved.

Further detailed results can be provided on request.

Technical Contact

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