

Acronal[®] 5453 E

Polymer Dispersions for Construction

Chemical nature Aqueous dispersion of a styrene acrylic copolymer. Acronal[®] 5453 E is manufactured without APEO, formaldehyde and ammonia.

Properties

Physical form Liquid, dispersion

Technical data

(not supply specification)

Solids content	DIN EN ISO 3251	~ 60 %
pH value	DIN ISO 976	4.0 – 5.5
Viscosity	DIN EN ISO 3219 (100 1/s, 23 °C)	60 – 300 mPa·s
Glass transition temperature (T _g)		~ -10 °C

Application

Areas of application

Acronal® 5453 E is used to manufacture flexible coatings like, for example, flexible crack bridging systems for flat roofs with high mechanical and UV-resistance.

Acronal® 5453 E based formulations exhibit excellent levelling properties and low dirt pick-up.

Acronal® 5453 E and formulations thereof offer a low water uptake and good water resistance.

Because of the excellent flexibility of the pure dispersion and the good pigment binding power it is possible to achieve very good elasticity properties in formulated coatings up to high pigment value concentrations of 40 – 50 %

To ensure optimum filler compatibility, sodium hydroxide (10 % solution) should be added to adjust the pH of the dispersion to 8 and the dispersion should also be stabilized with Dispex® AA 4135. When the pH value is increased, the dispersion becomes thicker, so the addition of another thickening agent is unnecessary in many cases.

Processing

Because Acronal® 5453 E, like all similar dispersions, has a tendency to foam, it is advisable to add a standard commercial antifoam when making flexible coatings. Its suitability should be clarified in tests. In tests carried out to date FoamStar® SI 2210 has proven to be especially suitable for suppressing the foaming of viscous flexible coatings based on Acronal® 5453 E.

Although Acronal® 5453 E does not need any film-forming aids, it is possible to add 1 – 3 % of higher-boiling solvents (e. g. Loxanol® CA 5308) to increase the pot life. Compatibility should be determined in the processor's own tests. It should be noted, however, that larger quantities of high-boiling film-forming aids lead to an increase in the surface tack and tendency of the flexible coatings to pick-up dirt.

Preservatives must also be added to final products based on Acronal® 5453 E to ensure consistent quality even after a long time in storage. Their compatibility and effectiveness should be determined in preliminary tests.

Safety

When handling this product, please comply with the advice and information given in the safety data sheet and observe protective and workplace hygiene measures adequate for handling chemicals.

Note

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights, etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. The agreed contractual quality of the product results exclusively from the statements made in the product specification. It is the responsibility of the recipient of our product to ensure that any proprietary rights and existing laws and legislation are observed.

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