

Laromer® PE 55 Aqua

General	Emulsified acrylic resin for the formulation of radiation curable coatings for wood, wood products and plastic applications.
Key features & benefits	tough and flexible film low surface roughness in wooden substrates good chemical resistance tacky before UV curing step
Chemical nature	water based UV curable acrylic emulsion

Properties

Appearance	opaque liquid with medium viscosity	
Typical characteristics <i>(should not be interpreted as specifications)</i>	viscosity at 23°C	250~650 mPa·s
	non-volatile components (1 g, 125°C, 1 h)	48%~52%
	pH value	4.0~6.0
	density	1.00 g/mL
	sensitivity to frost	< 0°C

Application

solubility, compatibility

For processing, Laromer® PE 55 Aqua can be further diluted with DI water. In order to adjust hardness and chemical resistance, it can be combined with Laromer® PE 22 Aqua. For viscosity and rheology improvement we recommend thickeners from BASF (e.g. Rheovis® PU 1250, urethane mid-shear thickener; slightly pseudoplastic).

fields of application

Laromer® PE 55 Aqua has been developed for pigmented and unpigmented primers and topcoats for wooden furniture and plastics where low tack before UV step is not necessary. Laromer® PE 55 Aqua can be applied by means of curtain-, spray- and roller coating in high speed coating equipment.

Laromer® PE 55 Aqua is suitable for the development of waterborne UV curable hydroprimers to achieve best adhesion on wooden substrates. For solid content adjustment we recommend combinations with 100% UV curable resins out of our product range (e.g. Laromer® EA 8765 R or Laromer® PO 8982).

Prior to radiation curing, all water must be removed from the film in order to prevent turbid and mechanically unstable coatings. The UV curing step should follow direct after the water evaporation in order to achieve optimum curing results.

For UV curing photo initiator needs to be added. Liquid photo initiators can be stirred in easily, crystalline photo initiators must be dissolved in the coating. For the surface curing we recommend the addition of approx. 1%~3% of α -hydroxy ketone calculated on solid dispersion. For film thicknesses above 50 g/m² and for pigmented coatings we recommend the additional use of a BAPO. It improves the through curing by adding 0.2%~1.0% calculated on solid dispersion. With the recommended photo initiators, we expect no problems during the drying process of the dispersion caused by volatility of the initiators.

UV curable coating formulations containing photo initiators should be stored in UV-impermeable plastic containers.

Storage

Product ought to be kept within sealed unopened containers. Containers should be stored between 5~30 °C and away from sunlight.

For further detailed application information please contact our Technical Support Department.

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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