Laromer® UA 8983 AQUA

Product description

Urethane modified acrylic resin for the formulation of radiation curable coatings for wood, wood products, paper and plastics (e.g. PVC).

Key benefits

- High reactivity
- Excellent film forming properties
- Polymer according to EU definitions

Chemical nature

Water based urethane acrylate dispersion

Properties

Physical form

Clear, low viscosity liquid

Technical data

(not supply specification)

Viscosity at 23°C (73 °F) D = 250 s-1	DIN EN 12092	50 – 300 mPa.s
Non-volatile components (1 g, 125 °C, 1 h)	DIN EN ISO 3251	38.0 – 42.0 %
pH value	DIN ISO 976	6.0 – 8.0
Density		~ 1,10 g/cm^3
Acid value		< 0.5 mg KOH/g
Iodine color number		<= 2
Flash point		<100 °C (212 °F)

Application

Solubility, Compatibility

For processing, Laromer® UA 8983 Aqua can be further diluted with DI water. It shows a very good compatibility with other UV curable dispersions (e.g. Laromer® UA 9005 Aqua and Laromer® UA 9064 Aqua) and conventional dispersions (e.g. Joncryl® 8330). For viscosity and rheology improvement we recommend thickeners from BASF (e.g. Rheovis® PE 1330; high-shear thickener; slightly pseudoplastic) and Rheovis® PU 1250 NC; urethane mid-shear thickener; slightly pseudoplastic).

Laromer® UA 8983 Aqua shows, in front of UV curing, highest physical drying properties and high scratch and abrasion resitances

Laromer® UA 8983 Aqua offers good chemical resistances as well as fast drying on many substrates. Coatings which are resistant to blocking and household chemicals are only formed after radiation curing.

Prior to UV curing, all water needs to be removed from the film in order to prevent staining and mechanically unstable coatings.

For UV curing photo initiator needs to be added. Liquid photo initiators can be stirred in easily, cristalline photo initiators must be dissolved in the coating.
For the surface curing we recommend the addition of approx. 1 – 3 % of α-HK calculated on solid dispersion.

For film thicknesses above 50 g/m² and for pigmented coatings we recommend the additional use of an acyl phosphine oxide, e.g. BAPO or MAPO. 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.

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

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