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Laromer® UA 9059 Aqua

Product description

For the formulation of radiation curable coatings for inks, wood, wood products, paper and plastic applications.

Key benefits

- Excellent adhesion on wood
- Very flexible
- Excellent coin-test results

Chemical nature

Aliphatic urethane acrylate, 70 % dissolved in water

Properties

Physical form

Medium- to high-viscosity liquid

Technical data

(no supply specification)

Viscosity, dynamic	DIN EN 12092 (23°C (73 °F), D = 100 s^{-1})	4 – 12 Pa.s
Non-volatile components	DIN EN ISO 3251 (60 min, 125 °C)	68.0 – 72.0 %
pH value	DIN ISO 976	6.0 – 8.0
Density at 23 °C	DIN EN ISO 2811-1	~ 1.1 g/cm^3

Application

Laromer® UA 9059 Aqua is a water-based radiation curable aliphatic urethane acrylate for the formulation of radiation curable coatings.
Noteworthy are the good adhesion directly on wood and the applicability as a hydroprimer on different wood substrates. Applying Laromer® UA 9059 Aqua as hydroprimer on parquet, excellent coin test results can be obtained.

Formulation guideline

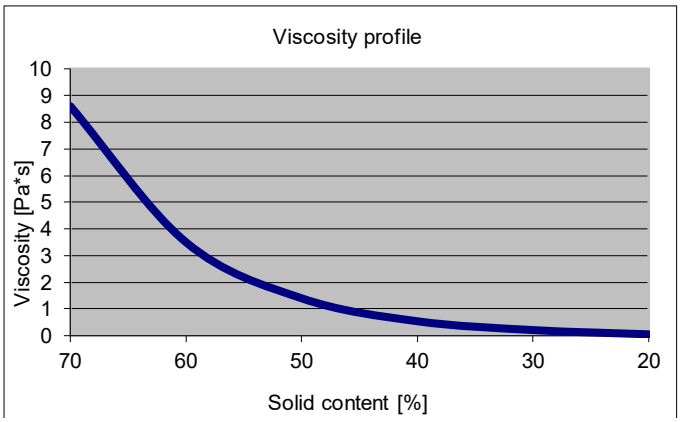
Using Laromer® UA 9059 Aqua as hydroprimer it is recommended to adjust the viscosity with water to app. 1.5 Pa.s and the use of a suitable photoinitiator (e.g. of α-hydroxy ketone and benzophenone). At coating thicknesses of app. 10 g/m^2 a thermal drying step is not necessary; the applied hydroprimer coating can be directly UV-cured or overcoated with a 100% UV-laquer. For a good intercoat adhesion of subsequent coating layers it is recommended not to fully cure the hydroprimer.

At higher coating thicknesses a thermal curing step is necessary in order to fully remove all water. Insufficient drying may cause a whitening effects in the film after UV-curing.

If Laromer® UA 9059 Aqua is used as tinted stains, next to using pigment preparations or dyes (e.g. Luconyl®, Luconyl® NG or Irgasperse® U/U2) a suitable photoinitiator must be used. In order to secure through hardening, an acyl phosphine oxide, e.g.MAPO or BAPO photoinitiatros are recommended. When used in pigmented formulations, the formulation may become instable. Here, the addition of 10 % of butyl glycol or 10% of diethylene glycol monobutylether improves the stability.

Solubility, diluent tolerance

Laromer® UA 9059 Aqua is soluble in all common watersoluble solvents used in the coating industry (e.g. ethanol, butyl glycol and methoxy propanol.
Water can used to adjust the viscosity. At solids of < 30 % and at elevated storage temperature turbidity may occur.



Compability

Laromer® UA 9059 Aqua is compatible watersoluble UV-curable acrylates such as Laromer® EA 8765 and Laromer® PO 9034. When mixing with UV-curable dispersions or emulsions, incompatibilities may occur, depending on the mixing ratio (i.e. thickening). Therefore, compatibility should be checked.

For the formulation of tinted coatings, Luconyl® pigment preparations or Irgasperse® U/U2 dyes can be used.

Storage

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

The product is sensitivity to frost (< 0 °C (32 °F)).

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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