

Industrial Coatings

Technical Data Sheet

Laromer® UA 9095 Aqua

(old: Laromer® UA 9095)



Product Description	Laromer® UA 9095 Aqua is a liquid urethane acrylate dispersion. It can be used in energy curable resin formulation for coating applications, such as wood, wood products, paper and plastics.
Key Features & Benefits	<ul style="list-style-type: none">- high grain enhancement- very good chemical resistance- high wet transparency- good abrasion resistance- low yellowing
Chemical Composition	Water based urethane acrylate dispersion

Properties

Typical Properties	Appearance	Low viscosity; opaque to slightly transparent
	Solid content	39%
	Viscosity at 23°C (DIN EN ISO 3219)	mPa s 50 - 500
	Shear rate D	s ⁻¹ 50
	pH	~ 7.8
	Density at 20°C (ISO 8962, DIN 53217)	g/cm ³ ~ 1.065
	Sensitivity to frost (ISO 2811, DIN 53217)	< 0 °C (32 °F)
	Average particle size	µm < 120

Diluent tolerance, viscosity Adjustment and compatibility

For processing, Laromer® UA 9095 Aqua can be further diluted with DI water. It shows a very good compatibility with other UV curable dispersions (e.g. Laromer® Aqua UA 9005 and Laromer® Aqua UA 9064) and conventional dispersions (e.g. Joncryl® 1992, Joncryl® 8330, and Joncryl® OH 8312). 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).

Applications

Since Laromer® UA 9095 Aqua shows a very good grain enhancement it is suitable to make the natural colors more vibrant. In front of UV curing, the films formed by the dispersion, are showing a physical drying on the surface.

Laromer® UA 9095 Aqua offers good chemical resistance as well as fast drying on many substrates. Coatings which are resistant to blocking and household chemicals are only formed after radiation curing.

Coatings based on Laromer® UA 9095 Aqua dry very quickly and offer high scratch and abrasion resistance.

Coatings based on Laromer® UA 9095 Aqua are showing very little yellowing and are therefore suitable for white pigmented coatings.

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, photoinitiator needs to be added. The photoinitiator types include, for example, α -hydroxy ketone and α -hydroxy ketone/benzophenone blends. Liquid photoinitiators can be stirred in easily. Crystalline photoinitiators must be dissolved in the coating. The amount of photoinitiator varies between 1 – 3% calculated on solid dispersion.

For film thicknesses above 50 g/m² and for pigmented coatings we recommend the additional acyl phosphine oxide types (MAPO, MAPO-Liquid and BAPO) photoinitiators. It improves the through curing by adding 0.2% – 1.0 % calculated on solid dispersion.

With the recommended photoinitiators we expect no problems during the drying process of the dispersion caused by volatility of the initiators.

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

Recommended Starting Point Formulation

Low Gloss Clear Topcoat

Material	Pounds
Laromer® UA 9095 Aqua	75.8
Omnirad 500	1.0
Acematt 3300	2.0
Hydropalat® WE 3370	0.8
Foamstar® ST 2438	0.5
Rheovis® PU 1191	0.6
Wetting Agent	0.5
DI Water	18.8
<i>Total</i>	<i>100.0</i>

One possible wetting agent is Hydropalat® WE 3475.
Solids, 33.14% by weight, 32.05% by volume. Calculated VOC 11.50 g/L (0.10 lb./gal).

Please contact the local BASF technical specialist for further details.

Safety

General

The usual safety precautions when handling chemicals must be observed. These include the measures described in federal, state, and local health and safety regulations, thorough ventilation of the workplace, good skin care, and wearing of protective goggles.

Safety Data Sheet

All safety information is provided in the Safety Data Sheet for Laromer® UA 9095 Aqua.

Important

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