

Industrial Coatings

Technical Data Sheet



Laromer® UA 9033

Product Description	Laromer® UA 9033 is for the formulation of radiation curable printing inks and coating for wood, wood products, paper and plastics
Key Features & Benefits	<ul style="list-style-type: none">- Good adhesion- Low viscosity- Good resistance to chemicals
Chemical Composition	Aliphatic urethane acrylate, 70% solution in Laromer LR 8887

Properties

Typical Properties	Appearance	medium – high viscous liquid
	Viscosity at 23°C (ISO 3219)	~ 25,000 cps
	Sheer rate D	50 s ⁻¹
	Iodine color number (DIN 6162)	≤ 2
	Density at 20°C (ISO 2811-1)	~1.04 g/cm ³
	Flash point (DIN EN ISO 2719)	> 110°C
Solubility, diluent tolerance	Soluble in all solvents common to the coatings industry except for aliphatic hydrocarbons. For the formulation of low viscous coatings, it can be thinned with monomers such as Laromer® HDDA, Laromer® DPGDA, or Laromer® TPGDA as well as with esters, ketones, or aromatic hydrocarbons.	
Compatibility	Homogenously miscible with most unsaturated acrylic resins such as other Laromer® grades. These typical values should not be interpreted as specifications.	

Applications

Laromer® UA 9033 is a reactive, aliphatic urethane-modified acrylic resin that is used as a sole binder or in combination with other reactive acrylic resins to formulate coatings for wood, paper, and plastic applications. Films formulated with Laromer® UA 9033 exhibit very little yellowing and excellent elasticity.

Processing	The processing viscosity desired can be adjusted by adding solvents common to the coatings industry, low volatile monomers such as mono-, di-, or tri-functional acrylates. Reactive thinners are incorporated into the film during curing and influence its properties. Mono-functional acrylates increase film flexibility, di-functional acrylates have little influence on film hardness and flexibility; tri-functional acrylates increase film hardness.
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Solvents contained in the formulation (or carried into it by the Laromer® resin) must be flashed off completely prior to exposure to energy since they would adversely influence film properties.

A suitable photoinitiator must be used to cure Laromer® UA 9033 with UV energy such as Darocur® 1173, Darocur® BP, Irgacure® 184, Irgacure® 819, Irgacure® 2100, Lucirin® TPO, and Lucirin® TPO-L for typical coating applications. The amount of photoinitiator varies between 2 – 5% based on Laromer® UA 9033 as delivered.

Higher reactivity, particularly in thin films, can be achieved by adding tertiary amines, such as methyl diethanolamine or reactive tertiary amines in combination with the photoinitiator. Care must be taken to ensure the amine does not react with the substrate, particularly a pale colored one.

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 9033.

Important

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