

Laromer[®] PR 9058

Product Description	Laromer PR 9058 is a modified acrylate used in the formulations of energy curable inks and coatings for wood, paper, and plastic application.
Key Features & Benefits	<ul style="list-style-type: none">- <i>Excellent pigment wetting</i>- <i>High filler acceptance</i>- <i>Low viscosity</i>
Chemical Composition	Modified acrylate

Properties

Typical Properties	Appearance		low-medium viscous liquid
	Acid value	mg KOH/g	≤ 5
	Viscosity at 23°C (73°F)	cps	3,000-6,000
	Iodine color number		≤ 2.5
	Density	g/cm ³	~1.1
	Flashpoint	°C	>100
Solubility, diluent tolerance	To reduce its viscosity and for further processing, it can be thinned with hexanediol diacrylate, trimethylolpropane triacrylate, tripropyleneglycol diacrylate, dipropyleneglycol diacrylate, or low viscosity polyether acrylates.		
	It can be thinned with many solvents common to the coatings industry, such as esters, ketones, or aromatic hydrocarbons. Due to its limited compatibility, aliphatic hydrocarbons are not recommended.		
Compatibility	Laromer PR 9058 can be mixed homogenously with most unsaturated acrylic resins, e. g., other Laromer acrylic resins.		
	* These typical values should not be interpreted as specification.		

Applications

Laromer PR 9058 can be used as a single resin or in combination with other radiation curable acrylates for the formulation of UV- or EB-curable coatings.

Laromer PR 9058 shows an exceptional good pigment wetting. Therefore, formulations with high amounts of inorganic fillers can be obtained without jeopardizing viscosity and flow compared with other non-modified resins.

The desired application viscosity of coating formulations based on Laromer PR 9058 can as well be achieved by the addition of low-volatile monomers or with low viscous polyetheracrylates (i.e. Laromer LR 8863, Laromer PO 43 F, Laromer PO 8967 or Laromer PO 33 F). Since such monomers/oligomers are linked into the film during the curing process, they contribute to the final film properties.

Processing	Laromer PR 9058 can be further diluted with low volatile monomers such as mono-functional, di-functional, or tri-functional acrylates. These are incorporated into the film during curing and thus influence properties in inks and coatings. 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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Laromer PR 9058 dissolves in many solvents commonly used in the paint industry with the exception of aliphatic hydrocarbons

With an adequate flash-off zone available, inert solvents may also be used. These must, however, be completely removed from the film prior to energy curing.

A suitable photoinitiator must be used to photocure Laromer PR 9058. The photoinitiator types include, for example, α -hydroxy ketone, benzophenone, acyl phosphine oxide, and blends thereof, for typical coating applications. The amount of photoinitiator varies between 2 – 5 % based on Laromer PR 9058 as delivered. Acyl phosphine oxide types (MAPO, MAPO-Liquid and BAPO) of photoinitiators are recommended for film thicknesses of 50 g/cm² to ensure thorough curing.

To increase the reactivity in thin films, a tertiary amine such as methyl diethanolamine or an amine synergist can be added in combination with a photoinitiator to formulations. Care must be taken to ensure that the amine does not react with the substrate, particularly pale colored ones.

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 PR 9058.

Storage

Please refer to the "Handling and Storage of Polymer Dispersions" brochure.

Important

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