

# Industrial Coatings

## Technical Data Sheet

# Laromer<sup>®</sup> PE 8981



<b>Product Description</b>	Laromer <sup>®</sup> PE 8981 is a liquid polyester-modified acrylic resin. It can be used in energy curable resin formulations for coating applications, such as wood, wood products, paper, and plastic.
<b>Key Features &amp; Benefits</b>	<ul style="list-style-type: none"><li>- <i>Highly reactive</i></li><li>- <i>Good flexibility</i></li><li>- <i>Low viscosity</i></li><li>- <i>Good sanding properties</i></li></ul>
<b>Chemical Composition</b>	Polyester acrylate

### Properties

<b>Typical Properties</b>	Appearance	medium viscous liquid
	Acid value (EN ISO 3682)	≤ 5 mg KOH/g
	Viscosity at 23°C (ISO 3219 A)	4,000 - 14,000 cps
	Shear rate D	100 s <sup>-1</sup>
	Iodine color number (DIN 6162)	≤ 10
	Density (ISO 2811-3)	~ 1.15 g/cm <sup>3</sup>
	Flash point (DIN EN ISO 2719)	> 100°C

<b>Solubility, diluent tolerance</b>	Soluble in many solvents common to the coatings industry except in aliphatic hydrocarbons.  For the formulation of low viscous coatings, it can be thinned with monomers such as Laromer <sup>®</sup> HDDA, Laromer <sup>®</sup> TMPTA, and Laromer <sup>®</sup> TPGDA or with esters, ketones, and aromatic hydrocarbons.
<b>Compatibility</b>	Can be homogenously mixed with most unsaturated acrylic resins such as other Laromer <sup>®</sup> grades.  These typical values should not be interpreted as specifications.

### Applications

<b>General</b>	Laromer <sup>®</sup> PE 8981 has a balanced property profile such that it can be used as a sole binder or in combination with other unsaturated acrylic resins for the formulation of EB or UV curable coatings for wood, wood products, paper, and plastic applications.  Cured films based on the highly reactive Laromer <sup>®</sup> PE 8981 are very flexible and resistant to scratching. They are particularly well sand-able when used as a roll primer.  Laromer <sup>®</sup> PE 8981 is recommended for applications such as: <ul style="list-style-type: none"><li>• Interior/exterior general industrial metal coating applications</li><li>• Interior/exterior plastic components coating applications</li><li>• Interior/exterior wood coatings for floor, furniture, or millwork applications</li></ul>
<b>Processing</b>	Laromer <sup>®</sup> PE 8981 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 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.

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® PE 8981. The photoinitiator types include, for example,  $\alpha$ -hydroxy ketones, benzophenones, acyl phosphine oxides, and blends thereof, for typical coating applications. The amount of photoinitiator varies between 2 – 5% based on Laromer® LR 8981 as delivered.

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

No tertiary amine co-initiator is needed for Laromer® PE 8981. This is particularly advantageous if low post-curing odor is required or if the migration of un-reacted residual amine to the surface has to be avoided.

Please contact the local BASF technical specialist for further details.

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## 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® PE 8981.

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## Important

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