

# Laromer<sup>®</sup> PE 9004

**Product description** Laromer<sup>®</sup> PE 9004 is a liquid polyester acrylate used for the formulation of energy curable coatings for wood, wooden based Products, paper and plastic.

**Key benefits**

- Economical resin
- Low content of reactive diluents
- Balanced property profile

**Chemical nature** Polyester acrylate

## Properties

**Physical form** Clear, low viscous liquid

<b>Technical data</b> (not supply specification)	Viscosity at 23°C (73 °F) D = 25 s-1	DIN EN 12092	20 – 50 Pa s
	Acid value	DIN EN ISO 2114	<= 5 mg KOH/g
	Iodine color number	DIN EN 1557	<= 10

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## Application

### Solubility, Compatibility

Laromer® PE 9004 is an economical polyester acrylate resin with a balanced property profile. 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.

Laromer® PE 9004 is recommended for applications such as:

- Interior wood coatings for flooring and furniture applications
- Interior plastic components coating applications
- Interior general industrial metal coating applications

### Formulation guideline

Laromer® PE 9004 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 solvents have to be completely removed from the film prior to energy curing.

A suitable photoinitiator must be used to photocure Laromer® PE 9004. The photoinitiator types include, for example,  $\alpha$ -hydroxy ketone, benzophenone, acyl phosphine oxide, and blends thereof, for typical coating applications. The amount of photoinitiator varies between 2 – 5% based on Laromer® PE 9004 as delivered.

Acyl phosphine oxide types (MAPO, MAPO-Liquid and BAPO) of photoinitiators are recommended for film thicknesses of 50 g/cm<sup>2</sup> to ensure through curing.

In order to increase the reactivity in thin films an amine synergist such as Laromer® PO 8956 M can be added to formulations.

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## Storage

Product ought to be kept within sealed unopened containers. Containers should be stored **below 35 °C** and away from sunlight.

### 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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