

Laromer® PO 9026

General

Laromer® PO 9026 is a polyether acrylate resin with ca. 50 % nano-scale silica content for the formulation of radiation-curable coatings for plastics, wood and wood products.

Key features & benefits

excellent scratch resistance
free of reactive diluents
high hardness

Chemical nature

polyether acrylate resin, free of reactive diluents with nano-silica

Properties

Appearance

low viscous liquid

Typical characteristics

(should not be interpreted as specifications)

viscosity at 23°C	0.6~1.5 Pa·s
refractive index at 20°C	1.45~1.47
color, Platin-Cobalt scale (Hazen/APHA)	≤ 200
density at 20°C	1.35~1.45
SiO ₂ content by weight	48%~52%

Application

solubility, compatibility

Laromer® PO 9026 can be diluted with many different solvents common to the coatings industry (e.g., esters, ketones or aromatic hydrocarbons). Due to its limited compatibility, aliphatic hydrocarbons and alcohols are not recommended.

Laromer® PO 9026 can be homogeneously blended with most unsaturated acrylic resins such as other Laromer® grades. In combination with strongly alkaline components (e. g., tertiary amines to increase reactivity or amine-modified products), incompatibilities may occur sporadically.

fields of application

Laromer® PO 9026 shows an extraordinarily good resistance to scratching and is recommended to be used in combination with other radiation-curable resins to formulate UV/EB curable coatings for wood, wood products and plastics.

Laromer® PO 9026 can be blended with low-volatile monomers such as monofunctional, difunctional or trifunctional acrylates. Due to the relatively low viscosity, it can also be blended with higher viscous energy-curable oligomers and polymers. Blend partners are incorporated into the film during curing and thus influence its properties. Monofunctional acrylates increase the coating's flexibility; difunctional acrylates have little effect on hardness and flexibility while trifunctional acrylates increase hardness.

Inert, volatile solvents such as ketones or esters can be used to reduce the viscosity of the formulation. In this case, the solvent must be flashed off sufficiently prior to UV / EB curing.

A suitable photoinitiator must be used to photocure Laromer® PO 9026. 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® PO 9026. Acyl phosphine oxide types (MAPO, MAPO-Liquid and BAPO) of photoinitiators are recommended for film thicknesses of 50 g/cm² to ensure through curing.

Scratch resistance can be improved significantly by adding approx. 20%~30% (by weight of the recipe) of Laromer® PO 9026.

Storage

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

For further detailed application information please contact our Technical Support Department.

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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