

Laromer[®] PE 9074

General

Laromer[®] PE 9074 is a polyester acrylate resin for the formulation of radiation-curable inks and coatings for wood, wood products and plastics.

Key features & benefits

free of reactive diluents
high toughness
good chemical resistance

Chemical nature

polyester acrylate resin, free of reactive diluents

Properties

Appearance

viscous liquid

Typical characteristics

(should not be interpreted as specifications)

viscosity at 23°C	7~13 Pa·s
acid value	≤ 5 mg KOH/g solids
iodine color number	≤ 5

Application

solubility, compatibility

To reduce the resin viscosity for further processing, Laromer[®] PE 9074 can be further diluted with low volatile monomers such as monofunctional, difunctional, or trifunctional acrylates. Laromer[®] PE 9074 can be diluted with many different solvents common to the coatings industry (e.g., esters, ketones or aromatic hydrocarbons). Due its limited compatibility, aliphatic hydrocarbons are not recommended.

fields of application

The pronounced ductility/toughness of UV-cured coatings based on Laromer[®] PE 9074 provides an interesting profile of mechanical properties demanded in many applications, e.g., post-forming.

With its viscosity of 7~10 Pa·s, Laromer[®] PE 9074 is suitable for application methods, such as offset printing and roller coating.

Laromer[®] PE 9074 is used as a sole binder or in combination with other radiation-curable resins to formulate coatings curable by ultraviolet light or electron beam.

Laromer[®] PE 9074 can be further diluted with low-volatile monomers such as monofunctional, difunctional or trifunctional acrylates. These 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 based on Laromer® PE 9074. In this case, the solvent must be flashed off sufficiently prior to UV / EB curing.

A suitable photoinitiator must be used to photocure Laromer® PE 9074. 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® PE 9074 as delivered. Acyl phosphine oxide types (MAPO, MAPO-Liquid and BAPO) of photoinitiators are recommended for film thicknesses of 50 g/cm² to ensure through curing.

To increase the reactivity particularly in thin films, tertiary amines such as methyl diethanol amine, reactive tertiary amines or amine- modified polyether acrylates (e.g., Laromer® PO 84 F) can be added in combination with a photoinitiator such as benzophenone and derivatives. Care should be taken to ensure that the amine does not react with the substrate, particularly pale-colored ones.

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.

® = registered trademark, ™ = trademark of the BASF Group, unless otherwise noted

BASF East Asia Regional Headquarters Ltd.

45th Floor, Jardine House, No. 1 Connaught Place, Central, Hong Kong