

Laromer® PO 94 F

General

Amine-modified polyether acrylate for the formulation of radiation curable coatings and printing inks for wood, wood based-products, paper and plastics.

Key features & benefits

outstanding reactivity
excellent film forming properties
high solvent resistance
polymer according to EU definitions

Chemical nature

amine modified polyether acrylate

Properties

Appearance

clear, medium viscous liquid

Typical characteristics

(should not be interpreted as specifications)

viscosity at 23°C	450–750 mPa·s
acid value	≤ 0.5 mg KOH/g solids
iodine color number	≤ 2
density at 20°C	1.12 g/mL

Application

solubility, compatibility

Laromer® PO 94 F is a multifunctional, polymeric amine modified polyether acrylate generally employed to boost the reactivity of both UV/EB inks and UV/EB overprint varnishes in graphic arts and of pigmented and non-pigmented UV/EB lacquers in wood coatings.

Laromer® PO 94 F is fully compatible with all common monomers and with all common oligomers like epoxy, polyester and urethane acrylates. It is soluble in many organic solvents like esters, ketones and aromatic hydrocarbons as used in UV spray coating applications for example.

fields of application

Laromer® PO 94 F provides superior film forming properties leading to tough, flexible coatings after UV/EB curing. It also features outstanding solvent fastness with high MEK and acetone resistance.

In internal comparison (amine-modified polyether acrylate range) the Laromer® PO 94 F shows high reactivity at medium viscosity and hardness of the formed film.

Laromer® PO 94 F is an excellent choice as sole binder for radiation curable clear coats, where fast curing speed, high gloss and low yellowing are required. Due to its moderate viscosity it could be used in wood coatings as a sole binder for spray- and curtain coating applications.

Laromer® PO 94 F is particularly suitable as main binder or co-binder resin for UV/EB overprint varnishes as well as for UV/EB offset and UV flexo inks in food packaging applications, where low odor and a very low level of migratable species are required.

A suitable photoinitiator must be used to photocure Laromer® PO 94 F. 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 94 F 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.

For further acceleration of curing speed we recommend the use of amine synergists such as Laromer® PO 9103, Laromer® PO 9104 or Laromer® PO 9106. Migration of amine synergists to the surface - (“blooming” effect) – is not possible, since the amine functionality is covalently bound to the UV cured resin network after curing process.

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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