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# Laromer® PO 94 F

***Product Description***

**Laromer PO 94 F is a liquid modified polyether acrylate oligomer for the formulation of energy curable printing inks and coatings for wood, wood products, paper, and plastic applications.**

***Key Features & Benefits***

***- Very high reactivity***
***- Good pigment wetting***
***- Low viscosity***
***- Good surface cure properties***

***Chemical Composition***

**Amine-modified polyether acrylate**

## Properties

***Typical Properties***

| | | |
|---|---|---|
| Appearance | | clear, low viscous liquid |
| Acid value | | |
| (DIN EN ISO 2114, method B) | mg KOH/g | ≤ 0.5 |
| Viscosity at 23°C | | |
| (DIN EN ISO 3219) | mPas | 450 – 750 |
| Shear rate D | $s^{-1}$ | 2,000 |
| Iodine color number | | |
| (DIN 6162) | | ≤ 2 |
| Density at 25°C | | |
| (DIN 51757, method 4.3) | g/cm³ | ~ 1.12 |
| Flash point | | |
| (DIN EN ISO 2719) | °C | > 100 |

***Solubility, diluent tolerance***

Soluble in all common paint solvents except for aliphatic hydrocarbons.

For the formulation of low viscosity inks or coatings they, can be diluted with monomers such as Laromer HDDA, Laromer TMPTA, Laromer DPGDA, and Laromer TPGDA or with esters, ketones, and aromatic hydrocarbons.

***Compatibility***

Can be homogenously mixed with most unsaturated acrylate oligomers such as other Laromer grades.

These typical values should not be interpreted as specifications.

## Applications

Laromer PO 94 F is an amine-modified polyether acrylate containing amino groups. Owing to its high reactivity, it is frequently combined with other energy curable resins to increase the reactivity of the formulation.

Laromer PO 94 F offers low viscosity and the highest reactivity, making it useful in a variety of applications. In addition, it can be used as a sole binder in low viscosity, highly reactive inks or coatings.

Laromer PO 94 F is recommended in applications such as:

- Printing inks for flexographic, gravure, digital, or silk-screen applications
- Overprint varnishes for commercial, publication, or packaging applications
- Interior/exterior general industrial metal coating applications
- Interior/exterior plastic components coating applications
- Interior/exterior wood coatings for floor, furniture, or millwork applications.

Due to its amine modification Laromer PO 94 F imparts enhanced reactivity, especially when using H-abstraction Type II photoinitiators. It also enhances the reactivity of Type I photoinitiators $\alpha$-hydroxyketone, BAPO, MAPO and MAPO-Liquid, thereby minimizing oxygen inhibition and enhancing surface curing of thin layers. Depending on the application method, the selection of different photoinitiators may be required for ink formulations. BAPO, MAPO are recommended for film thicknesses above 50 g/cm² to ensure through curing.

***Processing***

Laromer PO 94 F 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 tertiary amine as co-initiator is not necessary. This is a significant advantage, particularly in cases where a low odor level after curing is specified or if migration (sweating) of a non-crosslinked tertiary amine constituent to the surface must be avoided.

## 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 PO 94 F.

## Storage

Please refer to the “Handling and Storage of Polymer Dispersions” brochure.

## Important

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