

Industrial Coatings

Technical Data Sheet



Laromer[®] PO 77 F

Product Description	Laromer [®] PO 77 F is a liquid modified acrylate for the formulation of energy curable coatings for wood, wood products, paper, and plastic applications.
Key Features & Benefits	<ul style="list-style-type: none">- Very high reactivity- Good adhesion- Low viscosity- Good resistance to chemicals- Good surface-cure penetration
Chemical Composition	Amine-modified polyether acrylate

Properties

Typical Properties	Appearance	medium viscous liquid
	Acid value (DIN EN ISO 2114, method B)	≤ 0.5 mg KOH/g
	Viscosity at 23°C (DIN EN ISO 3219)	1,000 – 3,000 cps
	Shear rate D	100 s ⁻¹
	Iodine color number (DIN 6162)	≤ 10
	Density at 20°C (ISO 2811, DIN 53217)	~ 1.10 g/cm ³
	Flash point (DIN EN ISO 2719)	> 100°C
Solubility, diluent tolerance	Soluble in all solvents common to the coatings industry except for aliphatic hydrocarbons.	
	For the formulation of low-viscous coatings they, can be thinned with monomers such as Laromer [®] HDDA, Laromer [®] TMPTA, and Laromer [®] TPGDA or with esters, ketones, and aromatic hydrocarbons.	
Compatibility	Can be homogenously mixed with most unsaturated acrylic resins such as other Laromer [®] grades.	
	These typical values should not be interpreted as specifications.	

Applications

Laromer[®] PO 77 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 77 F is medium-viscous and thus very well suited for highly reactive formulations for roller application. In addition, it can be used as a sole binder in low viscosity, highly reactive coatings.

Processing	Laromer [®] PO 77 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.
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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 suitable photoinitiator must be used to cure Laromer® PO 77 F with UV energy such as Darocur® 1173, Darocur® BP, Irgacure® 184, Irgacure® 819, Irgacure® 2100, Lucirin® TPO, and Lucirin® TPO-L for typical coating applications. The amount of photoinitiator varies between 2 – 5% based on Laromer® PO 77 F as delivered.

Lucirin® TPO and Lucirin® TPO-L are recommended for film thicknesses above 50 g/cm² to ensure through 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 77F.

Important

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