

# Printing & Packaging Industrial Coatings

Technical Data Sheet



## Laromer<sup>®</sup> EA 8765 R (old: Laromer<sup>®</sup> LR 8765 R)

<b>Product Description</b>	Laromer <sup>®</sup> EA 8765 R is an aliphatic epoxy-modified acrylate oligomer for the formulation of energy curable printing inks and coatings for wood, wood products, paper, and plastic applications.
<b>Key Features &amp; Benefits</b>	<ul style="list-style-type: none"><li>- Low viscosity</li><li>- High reactivity</li><li>- Good flexibility</li><li>- Partially water soluble</li></ul>
<b>Chemical Composition</b>	Aliphatic epoxy acrylate

### Properties

<b>Typical Properties</b>	Appearance	low- to medium-viscous liquid
	Acid value (EN ISO 3682)	≤ 5 mg KOH/g
	Viscosity at 23°C (ISO 3219 A)	600 – 1,200 cps
	Shear rate D	250 s <sup>-1</sup>
	Iodine color number (DIN 6162)	≤ 5
	Density (ISO 2811-3)	~ 1.100 g/cm <sup>3</sup>
	Flash point (DIN EN ISO 2719)	> 100°C (212°F)
<b>Solubility, diluent tolerance</b>	Soluble in all solvents common to the coatings industry with the exception of aliphatic solvents.  For processing, it can be diluted with monomers such as Laromer <sup>®</sup> HDDA, Laromer <sup>®</sup> TMPTA, Laromer <sup>®</sup> DPGDA, or Laromer <sup>®</sup> TPGDA as well as with esters, ketones, or aromatic hydrocarbons.	
<b>Compatibility</b>	Homogenously miscible with most unsaturated acrylate oligomers such as other Laromer <sup>®</sup> grades.  These typical values should not be interpreted as specifications.	

### Applications

Laromer<sup>®</sup> EA 8765 R can be used solely or in combination with other unsaturated acrylate oligomers to formulate electron beam or energy curable printing inks and coatings for wood, wood products, plastics, and paper applications. It displays low viscosity, good flexibility, and high reactivity. Furthermore, it can be diluted with up to 25 % water.

Laromer<sup>®</sup> EA 8765 R is recommended for applications such as:

- Printing inks for flexographic, gravure, lithographic, digital, or screen applications
- Overprint varnishes for commercial, publication, or packaging applications
- Interior/exterior wood flooring, furniture, or millwork applications

<b>Processing</b>	Laromer <sup>®</sup> EA 8765 R can be thinned further for processing with low volatile monomers such as mono-functional, di-functional, and tri-functional acrylates or with low viscosity polyether acrylates such as Laromer <sup>®</sup> LR 8863, Laromer <sup>®</sup> PO 43 F, or Laromer <sup>®</sup> PO 8967. Since the monomers are incorporated into the film, they affect the properties of the cured ink or coating. Mono-functional acrylates increase film flexibility; di-functional acrylates have little effect on hardness and flexibility; tri-functional acrylates increase hardness.
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If sufficient flash-off room is available, inert solvents can also be used. They must, however, be completely removed from the coating before it is exposed to energy.

A suitable photoinitiator must be used to photocure Laromer® EA 8765 R. The photoinitiator types include, for example,  $\alpha$ -hydroxy ketone, benzophenone, acyl phosphine oxide, and blends thereof, for typical coating applications. The selection of different photoinitiators may be required for ink formulations. For film thicknesses above 50 g/cm<sup>2</sup>, Alpha-hydroxy ketones combined with Acyl phosphine oxide types (MAPO, MAPO-Liquid and BAPO) are suitable photoinitiators. Good results in thinner films are obtained with a combination of Benzophenone or and co-initiators.

Depending on the reactivity desired, the quantity of Laromer® EA 8765 R added varies in the formulation. To increase the reactivity, a tertiary amine such as methyl diethanolamine or an acrylated amine modified polyether can be added. Care should be taken to ensure that the amine does not react with the substrate, particularly pale colored ones. Testing prior to use is highly recommended.

Please contact the local BASF technical specialist for further details.

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## 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® EA 8765 R.

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## Important

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### U.S & Canada

BASF Corporation

24710 W Eleven Mile Road

Southfield, MI 48034

ph: 1(800) 231-7868

fax: 1(800) 392-7429

Email: [DispersionsPigmentsCC@basf.com](mailto:DispersionsPigmentsCC@basf.com)

Email: [edtech-info@basf.com](mailto:edtech-info@basf.com)

[www.basf.us/dpsolutions](http://www.basf.us/dpsolutions)

### Mexico

BASF Mexicana, S.A. de C.V.

Av. Insurgentes Sur # 975

Col. Ciudad de los Deportes

C.P. 03710

Mexico, D.F.

Phone: (52-55) 5325-2756

Fax: (52-55) 5723-3011