

Industrial Coatings

Technical Data Sheet

Laromer[®] LR 9019



Product Description	Laromer [®] LR 9019 is an aromatic epoxy-modified acrylic resin for the formulation of radiation curable printing inks and coatings for wood, wood products, paper and plastics
Key Features & Benefits	<ul style="list-style-type: none">- Minimal yellowing- Easy to blend with other photoinitiators
Chemical Structure	Modified aromatic epoxy acrylate

Properties

Typical Properties	Physical form	low – to medium viscous liquid
	Viscosity at 23 °C (73 °F) (DIN EN ISO 3219 A)(Shear rate D 100 s ⁻¹)	~ 25 mPa s
	Iodine color number (DIN 6162)	≤ 2.5
	Acid number (EN ISO 3682)	≤ 5 mg KOH/g
	Density (ISO 2811-3)	~ 1.16 g/cm ³
	Flash point (DIN EN ISO 2719)	> 100 °C (212 °F)
	Solubility, diluent tolerance	These Laromer [®] grades are soluble in all solvents common to the coatings industry with the exception of aliphatic solvents. For processing, they can be diluted with monomers such as Laromer [®] HDDA (hexanediol diacrylate), Laromer [®] TMPTA (trimethylolpropane triacrylate) or Laromer [®] TPGDA (tripropylene diacrylate) as well as with esters, ketones or aromatic hydrocarbons.
	Compatibility	The Laromer [®] grades listed are homogeneously miscible with most unsaturated acrylic resins, e. g., and other Laromer [®] grades.

These typical values should not be interpreted as specifications.

Applications

The resins can be used solely or in combination with other unsaturated acrylic resins to formulate electron- or UV-beam curable printing inks and coatings for wood, wood products, plastics and paper.

Laromer® LR 8986 shows low viscosity and good fastness and resistance properties. Laromer® LR 9019 and Laromer® LR 9023 are markedly more viscoelastic and more reactive than Laromer® LR 8986.

Processing

Monofunctional acrylates increase the coating's flexibility; difunctional acrylates have little effect on hardness and flexibility while trifunctional acrylates increase hardness.

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 radiation.

A photo initiator has to be added for curing by ultraviolet radiation. Suitable initiators are e. g., Irgacure® TPO, Irgacure® TPO-L, Irgacure® 1173, Irgacure® 184, Irgacure® 127, Irgacure® LEX 201 or Irgacure® 754.

Depending on the reactivity desired the quantity to be added varies from 2 % to 5 %. To increase the reactivity, a tertiary amine such as methyl diethanol amine or an acrylated amine can be added to Laromer® LR 8765 and Laromer® LR 8986. Care should be taken to ensure that the amine does not react with the substrate, particularly pale-colored ones.

Alpha-hydroxy ketones such as Irgacure® 184 or Irgacure® 1173 combined with Irgacure® 819 are suitable photoinitiators for film thicknesses above 50 g/cm². Good results in thinner films are obtained with a combination of Irgacure® 500 and co-initiators.

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 Laromer® LR 9019.

Storage

Protected from light, at temperatures below 30 °C (86 °F), and in tightly sealed containers, Laromer® LR 9019 can be stored for up to 6 months.

Important

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