

# Laromer<sup>®</sup> UA 9186

**Product description** Laromer<sup>®</sup> UA 9186 is a urethane acrylate oligomer useful in ultraviolet (UV) and electron beam (EB) curing compositions. It is a useful component in wood coating formulations and roller coat varnishes as well as UV-inks.

**Key benefits**

- Highly elastic
- Low yellowing
- Good adhesion
- Medium reactivity

**Chemical nature** Aliphatic urethane acrylate, 70 % solution in CTFA (trimethylol-propaneformal monoacrylate).

## Properties

**Physical form** Clear, medium-viscous liquid

<b>Technical data</b>	Viscosity, dynamic (23 °C, D = 25 s <sup>-1</sup> )	DIN EN 12092	6.0 – 15.0 Pa.s
<b>(not supply specification)</b>	Color (HAZEN)	DIN EN 6271	≤ 150
	Density at 20 °C		~ 1.04 g/cm <sup>3</sup>

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## Application

**Solubility, compatibility** Laromer® UA 9186 is a solvent-free urethane acrylate diluted with CTFA. It is mainly used as combination resin in UV- coatings and UV-inks to increase elasticity. Its high elasticity combined with low shrinkage increases adhesion on different substrates like plastic. Compared with other elastic urethane acrylates Laromer® UA 9186 is more reactive and requires less UV-dose. Its aliphatic character allows the use in weather resistant and low yellowing coatings.

**Fields of application** A suitable photoinitiator must be used to photocure Laromer® UA 9186. The photoinitiator types include, for example,  $\alpha$ -hydroxy ketone, benzophenone, acyl phosphine oxide, and blends thereof, for typical coating applications. The amount of photoinitiator varies between 2 – 5 % based on Laromer® UA 9186 as delivered.

Laromer® UA 9186 may slowly crystallize resulting in a slightly turbid product. Crystallization is reduced by the right choice of monomer. Therefore, it has to be checked if formulations based on Laromer® UA 9186 yield clear, defect free films after UV-curing as the crystals usually dissolve during the curing process.

For any outdoor use, where excellent weather resistance is required, the use of light stabilizers (e.g. Tinuvin® 400, Tinuvin® 292, ...) is recommended. For such coatings the right choice of photoinitiators is important. To allow good through-curing a phosphine oxide (MAPO, MAPO-Liquid and BAPO) should be part of the initiator cocktail.

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## Storage

Product ought to be kept within sealed unopened containers. Containers should be stored below 35 °C and away from sunlight.

### 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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