

# Industrial Coatings

## Technical Data Sheet

# Laromer® UA 9047



<b>Product Description</b>	Laromer® UA 9047 is a urethane-modified acrylic resin for the formulation of energy curable coatings for general industrial and automotive applications.
<b>Key Features &amp; Benefits</b>	<ul style="list-style-type: none"><li>- <i>Physical drying</i></li><li>- <i>High scratch resistance</i></li><li>- <i>Interior and exterior usage</i></li></ul>
<b>Chemical Composition</b>	Aliphatic urethane acrylate, 70% solution in butyl acetate

### Properties

<b>Typical Properties</b>	Appearance	low – medium viscosity liquid
	Non-volatile	~ 70 %
	Viscosity at 23°C (73°F)	~ 7,000 cps
	Shear rate D	~ 100 s <sup>-1</sup>
	Iodine color number	≤ 2
	Density at 20°C (68°F)	~ 1.082 g/cm <sup>3</sup>
	Flash point	> 26.5°C (79.7°F)

**Solubility, diluent tolerance** Soluble in all solvents common to the coatings industry except for aliphatic hydrocarbons.

For formulation of low viscosity coatings, it can be thinned with monomers such as Laromer® HDDA, Laromer® DPGDA, or Laromer® TPGDA as well as with esters, ketones, or aromatic hydrocarbons.

Laromer® UA 9047 is compatible with most unsaturated acrylic resins, i.e. other Laromer® brands.

These typical values should not be interpreted as specifications.

### Applications

Laromer® UA 9047 is an aliphatic urethane acrylate resin. It can be used as a sole binder or in combination with other reactive acrylic resins. Films formulated with Laromer® UA 9047 are resistant to yellowing and have good weathering resistance. Chemical and scratch resistance properties are mainly due to the functionality of the resin.

Laromer® UA 9047 is a physically drying urethane acrylate, which after UV curing, meets the highest demands in the automotive coatings industry. Even before UV light exposure, an almost tack-free film is obtained at room temperature after application and solvent flash off. Curing warms films at 80°C (176°F) under low oxygen conditions produces the highest surface qualities.

**Processing** Viscosity can be adjusted by adding inert organic solvents, radiation curable monomers (such as mono-, di-, or tri-functional acrylates), or suitable acrylic resins.

Solvents contained in the formulation (or carried into it by the Laromer® resin) must be flashed off completely prior to exposure to energy since they would adversely influence film properties.

A suitable photoinitiator must be used to cure Laromer® UA 9047 with UV energy such as Darocur® 1173, Darocur® BP, Irgacure® 184, Irgacure® 819, Irgacure® 2100, Irgacure® TPO, and Irgacure® TPO-L for typical coating applications. The amount of photoinitiator varies between 2 – 5% based on Laromer® UA 9047 as delivered.

Higher reactivity, particularly in thin films, can be achieved by adding tertiary amines, such as methyl diethanolamine or reactive tertiary amines in combination with the photoinitiator. Care must be taken to ensure the amine does not react with the substrate, particularly a pale-colored one.

---

## 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® UA 9047.

---

## Storage

Properly stored and protected from light and heat, an unopened original container of Laromer® UA 9047 should have a shelf life of at least 12 months. Store at temperatures below 30°C (86°F).

---

## Important

While the descriptions, designs, data and information contained herein are presented in good faith and believed to be accurate, they are provided for guidance only. Because many factors may affect processing or application/use, BASF recommends that the reader make tests to determine the suitability of a product for a particular purpose prior to use. **NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESCRIPTIONS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS.** In no case shall the descriptions, information, data or designs provided be considered a part of BASF's terms and conditions of sale. Further, the descriptions, designs, data, and information furnished by BASF hereunder are given gratis and BASF assumes no obligation or liability for the descriptions, designs, data or information given or results obtained all such being given and accepted at the reader's risk.

*Darocur, Irgacure, Laromer, and Lucirin are registered trademarks of BASF Group.*

© BASF Corporation, 2016



**Responsible Care®**  
Good Chemistry at Work

BASF Corporation is fully committed to the Responsible Care® initiative in the USA, Canada, and Mexico.

For more information on Responsible Care® go to:

U.S.: [www.basf.us/responsiblecare\\_usa](http://www.basf.us/responsiblecare_usa)

Canada: [www.basf.us/responsiblecare\\_canada](http://www.basf.us/responsiblecare_canada)

México: [www.basf.us/responsiblecare\\_mexico](http://www.basf.us/responsiblecare_mexico)

### U.S & Canada

BASF Corporation  
24710 W Eleven Mile Road  
Southfield, MI 48033

ph: 1(800) 231-7868

fax: 1(800) 392-7429

Email: [Custserv\\_charlotte@basf.com](mailto:Custserv_charlotte@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