

## PHENYLGLYCIDYL ETHER ACRYLATE



# INTRODUCTION

EBECRYL® 118 is an aromatic monofunctional acrylate that can be used as a reactive diluent in ultraviolet light (UV) or electron beam (EB) curing formulations. EBECRYL® 118 is a good diluent for a variety of acrylated oligomers. In formulations, it can lower Tg and increase flexibility of the UV/EB cured polymer while maintaining strength and toughness and improving substrate adhesion.

### PERFORMANCE HIGHLIGHTS

EBECRYL® 118 is characterized by:

- Low viscosity
- Secondary hydroxyl functionality

UV/EB cured products containing EBECRYL $^{\odot}$  118 are characterized by the following performance properties:

- Good reactivity
- Improved flexibility
- Decreased Tg
- Reduced shrinkage, improved adhesion
- Moisture resistance

The actual properties of UV/EB cured products also depend on the selection of other formulation components such as reactive diluents, additives and photo initiators.

# SUGGESTED APPLICATIONS

Formulated UV/EB curable products containing EBECRYL<sup>®</sup> 118 may be applied via direct or reverse roll, offset gravure, metering rod, slot die, knife over roll, air knife, curtain, immersion, and spin coating methods, as well as offset and screen printing. EBECRYL<sup>®</sup> 118 is recommended for use in:

- Coatings and inks with adhesion to plastics such as treated polyolefins and plasticized PVC
- Flexible coatings for paper and plastic
- 3D printing/additive manufacturing formulations
- Moisture resistant coatings

### **TYPICAL PHYSICAL PROPERTIES**

Acid value, mg KOH/g,	<2
Appearance	Clear liquid
Color, Gardner scale	<2
Density, g/ml at 25°C	1.16
Functionality, theoretical	1
Molecular weight, theoretical	222
Refractive index (n <sub>D</sub> at 20°C)	1.528
Viscosity at 25°C, mPa.s	~215

## **TYPICAL CURED PROPERTIES**

Tensile strength, psi (MPa)	1300 (9)
Elongation at break, %	265
Young's modulus, psi (MPa)	11600 (80)
Glass transition temperature, °C <sup>(2)</sup>	25

(1) UV cured 125  $\mu m$  thick films.

(2) Determined by Dynamic Mechanical Analysis; tan ( $\delta$ ) max.

## PRECAUTIONS

Before using EBECRYL<sup>®</sup> 118, see the Safety Data Sheet (SDS) for information on the identified hazards of the material and the recommended personal protective equipment and procedures.

### STORAGE AND HANDLING

Care should be taken not to expose the product to high temperature conditions, direct sunlight, ignition sources, oxidizing agents, alkalis or acids. This might cause uncontrollable polymerization of the product with the generation of heat. Storage and handling should be in stainless steel, amber glass, amber polyethylene or baked phenolic lined containers. Procedures that remove or displace oxygen from the material should be avoided. Do not store this material under an oxygen free atmosphere. Dry air is recommended to displace material removed from the container. Wash thoroughly after handling. Keep container tightly closed. Use with adequate ventilation.

See the SDS for the recommended storage temperature range for  $\mathsf{EBECRYL}^{\circledast}$  118.

#### 1.1 / 07.07.2021 (replaces all previous versions)

Worldwide Contact Info: www.allnex.com

Page 1/1

Disclaimer: allnex Group companies ('allnex') exclude all liability with respect to the use made by anyone of the information contained herein. The information contained herein represents allnex's best knowledge but does not constitute any express or implied guarantee or warranty as to the accuracy, the completeness or relevance of the data set out herein. Nothing contained herein shall be construed as conferring any license or right under any patent or other intellectual property rights of allnex or of any third party. The information relevance of the products is given for information is suitable for any specific use, performance or result. Any unauthorized use of the product or information may infringe the intellectual property rights of allnex, including its patent rights. The user should perform his/her own tests to determine the suitability for a particular purpose. The final choice of use of a product and/or information as well as the investigation of any possible violation of intellectual property rights or misappropriation of trade secrets of allnex and/or third parties remain the sole responsibility of the user. Notice: Trademarks indicated with \*, TM or \* as well as the allnex name and logo are registered, unregistered or pending trademarks of Allnex Netherlands B.V. or its directly affiliated allnex Group companies. ©2021 allnes Group. All Rights Reserved.