

# EBECRYL® 3300

## SPECIALTY EPOXY-ACRYLATE OLIGOMER

May 2018



### INTRODUCTION

Ebecryl®3300 is a highly reactive epoxy acrylate, diluted in DPGDA. When formulated and cross-linked with other suitable radiation curable oligomers and reactive diluents, it results in durable, hard-elastic and chemically resistant coating films of high quality.

For UV curing a suitable photoinitiator must be added to the formulation. The addition level depends on the line speed, number of lamps and thickness of the coating film.

### PERFORMANCE HIGHLIGHTS

Ebecryl®3300 is characterized by :

- ✓ Low viscosity
- ✓ Fast cure response
- ✓ Low colour
- ✓ Excellent storage stability when combined with acidic adhesion promoters, such as Ebecryl 168, Ebecryl 170 and Ebecryl 171

UV/EB cured coatings based on Ebecryl®3300 are characterized by the following performances :

- ✓ Outstanding adhesion to metal substrates
- ✓ Good compromise hardness/flexibility
- ✓ Good chemical resistance
- ✓ Excellent corrosion resistance

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

### SUGGESTED APPLICATIONS

Formulated UV/EB curable products containing Ebecryl®3300 may be applied by direct or reverse roll, curtain coating or spray methods.

Ebecryl®3300 is recommended for use in :

- clear or pigmented coatings on metal substrates;
- Coatings for paper, paperboard, wood, chipboard and rigid plastics where a compromise between adhesion, flexibility and hardness is necessary.

### VISCOSITY REDUCTION

Ebecryl®3300 can be further diluted with reactive monomers such as 1,6 hexanediol diacrylate (HDDA)<sup>(2)</sup>, trimethylolpropane triacrylate (TMPTA)<sup>(2)</sup>, tripropyleneglycol diacrylate (TPGDA)<sup>(2)</sup>, octyl/decyl acrylate (ODA)<sup>(2)</sup> and oligotriacrylate (OTA 480)<sup>(2)</sup>.

The choice of the reactive diluent(s) used will influence cured film performance properties such as hardness and flexibility.

<sup>(2)</sup> HDDA, TMPTA, TPGDA, ODA and OTA 480 are all produced by Allnex

### TYPICAL VALUES

Viscosity (C&P) at 25°C, mPa.s	± 1100
Colour, Gardner	max. 3
Acid value, mg KOH/g	max. 1.5

### PHYSICAL PROPERTIES

Density, g/cm <sup>3</sup>	1.12
Molecular weight, theoretical	550
Functionality, theoretical	2
Polymer solids, % by weight	65
DPGDA content, % by weight	35

### TYPICAL CURED PROPERTIES

Tensile strength, MPa <sup>(1)</sup>	63
Tensile elongation, % <sup>(1)</sup>	5
Glass transition temperature, °C	130

<sup>(1)</sup> measured on a 100µ EB cured film

### STORAGE AND HANDLING

Care should be taken not to expose radiation curable products to temperatures exceeding 40°C for prolonged periods or to direct sunlight. This might cause uncontrollable polymerization of the product with generation of heat.

Storage and handling should be in stainless steel, amber glass, amber polyethylene or baked phenolic lined containers.

Do not store this material under an oxygen free atmosphere. Use dry air to displace material removed from the container. This material should not be stored for more than 2 years.

### PRECAUTIONS

The toxicological properties of this material have not been fully determined. Products of this type are expected to be eye and skin irritant and have the potential to cause sensitization or other allergic responses. Appropriate precautions should be taken to avoid eye and skin contact and to avoid inhalation of the aerosols or vapours.

Please refer to the relevant Safety Data Sheet for appropriate handling procedures and protective equipment prior to using this or any other material referred to in this bulletin.

### STATUTORY LABELLING

Please refer to Safety Data Sheet.

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