

URETHANE ACRYLATE OLIGOMER

**INTRODUCTION**

EBECRYL® 8465 is an undiluted aliphatic urethane triacrylate oligomer. Films of EBECRYL® 8465 cured by ultraviolet light (UV) or electron beam (EB) exhibit excellent exterior durability, toughness and good flexibility, as well as the non-yellowing properties typical of an aliphatic urethane.

**PERFORMANCE DATA**

EBECRYL® 8465 is characterized by:

- Low colour
- High viscosity

UV/EB cured products based on EBECRYL® 8465 are characterized by the following performance properties:

- Excellent toughness
- Excellent exterior durability
- Non-yellowing

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

**SUGGESTED APPLICATIONS**

Formulated UV/EB curable products containing EBECRYL® 8465 may be applied by lithographic, screen, gravure, direct or reverse roll, and curtain coating methods.

EBECRYL® 8465 is recommended for use in:

- Coatings for wood and plastics requiring excellent exterior durability

**TYPICAL VALUE**

Appearance	clear liquid
Höpller viscosity at 60°C, mPa.s	ca. 2100
Colour, Gardner	max. 2

**PHYSICAL PROPERTIES**

Density, g/cm <sup>3</sup>	1.14
Molecular weight, theoretical	± 1400
Functionality, theoretical	3
Polymer solids, % by weight	100

**TYPICAL CURED PROPERTIES**

Tensile strength, MPa	25.1
Tensile elongation, %	50
Young Modulus, MPa	113
Glass transition temperature, °C	36

**VISCOSITY REDUCTION**

EBECRYL® 8465 can be diluted with reactive monomers such as 1,6-hexanediol diacrylate (HDDA)<sup>(1)</sup>, trimethylolpropane triacrylate (TMPTA)<sup>(1)</sup>, tripropylene glycol diacrylate (TPGDA)<sup>(1)</sup>, dipropylene glycol diacrylate (DPGDA)<sup>(1)</sup> and oligotriacrylate (OTA 480)<sup>(1)</sup>. The specific reactive diluent(s) used will influence performance properties such as hardness and flexibility.

<sup>(1)</sup> product of allnex

**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.

**PRECAUTION**

The following is a summary of the precautions to be taken when handling this product. Please refer to the Safety Data Sheet for further details.

The toxicological properties of this material have not been fully determined. Products of this type can be 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. Consult 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.

See Safety Data Sheet for emergency and first aid procedures.

**STATUTORY LABELING**

Please refer to Safety Data Sheet.