

EPOXY ACRYLATE OLIGOMER

INTRODUCTION

EBECRYL® 3105 is a low viscosity, flexible, epoxy acrylate which is easier for the formulator to handle. Formulations based on EBECRYL® 3105 cured using ultraviolet light (UV) or electron beam (EB) have good flexibility, toughness and adhesion to wood.

PERFORMANCE HIGHLIGHTS

EBECRYL® 3105 is characterized by:

- low viscosity
- high reactivity

UV/EB cured formulations based on EBECRYL® 3105 are characterized by the following performance properties:

- good flexibility
- very good adhesion to wood
- toughness

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

SUGGESTED APPLICATIONS

UV/EB curable formulations containing EBECRYL® 3105 may be applied by direct or reverse roller coater.

EBECRYL® 3105 is recommended for use in:

- primers for wood
- clear coatings for paper, wood, flexible and rigid plastics

TYPICAL VALUES

Viscosity at 60°C, mPa.s	± 600
Colour, Gardner	max. 5
Acid value, mg KOH/g	max. 5

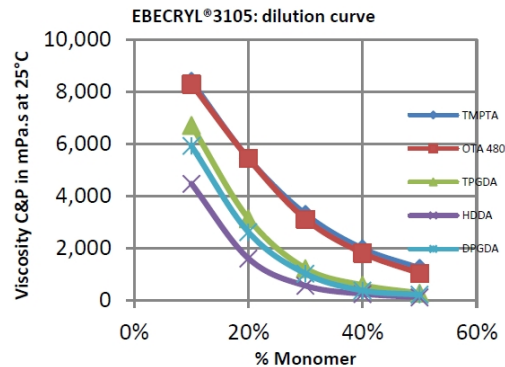
PHYSICAL PROPERTIES

Density, g/cm ³	1.18
Molecular weight, theoretical	900
Functionality, theoretical	2
Polymer solids, % by weight	100

VISCOSITY REDUCTION

EBECRYL® 3105 can be diluted with reactive monomers such as 1,6-hexanediol diacrylate (HDDA)⁽¹⁾, trimethylolpropane triacrylate (TMPTA)⁽¹⁾, tripropyleneglycol diacrylate (TPGDA)⁽¹⁾, dipropyleneglycol diacrylate (DPGDA)⁽¹⁾ and oligotriacrylate (OTA 480)⁽¹⁾. The specific reactive diluent(s) used will influence performance properties such as hardness and flexibility.

⁽¹⁾ product of allnex



The graph shows the viscosity reduction of EBECRYL® 3105 as a function of the concentration of different monomers.

EBECRYL® 3105 +	50%	40%	30%	20%	10%
TMPTA	1230	1980	3300	5440	8400
OTA 480	1030	1810	3110	5430	8290
TPGDA	273	577	1220	3130	6710
HDDA	115	243	555	1600	4470
DPGDA	214	373	1020	2610	5920

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 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.