

EPOXY-ACRYLATE IN TPGDA

INTRODUCTION

EBECRYL® 3700/30 TP is a bisphenol A epoxy acrylate oligomer diluted 30% of tripropyleneglycol diacrylate (TPGDA). This material is characterized by its fast cure response, low odour, and relatively low viscosity. Films of EBECRYL® 3700/30 TP cured by ultraviolet light (UV) or electron beam (EB) exhibit high gloss, high surface hardness, flexibility, and the superior chemical resistance typical of an epoxy.

PERFORMANCE HIGHLIGHTS

EBECRYL® 3700/30 TP is characterized by:

- Light colour
- Low odour
- Low viscosity
- Fast cure response

UV/EB cured products based on EBECRYL® 3700/30 TP are characterized by the following performance properties:

- Good chemical resistance
- High gloss
- Surface hardness

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® 3700/30 TP may be applied by lithographic, screen, gravure, direct or reverse roll, and curtain coating methods.

EBECRYL® 3700/30 TP is recommended for use in:

- Overprint varnishes
- Paper upgrading
- Wood fillers

TYPICAL VALUES

Höppler viscosity at 25°C, mPa.s	± 5700
Colour, Gardner	max. 3
Acid value, mg KOH/g	max. 0.75

PHYSICAL PROPERTIES

Density, g/cm ³	1.14
Molecular weight, theoretical	± 500
Functionality, theoretical	2
Polymer solids, % by weight	70
TPGDA, % by weight	30

VISCOSITY REDUCTION

EBECRYL® 3700/30 TP can be diluted with reactive monomers such as tripropyleneglycol diacrylate (TPGDA)⁽¹⁾, 1,6-hexanediol diacrylate (HDDA)⁽¹⁾ and trimethylolpropane triacrylate (TMPTA)⁽¹⁾. The specific reactive diluent(s) used will influence performance properties such as hardness and flexibility.

⁽¹⁾ 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.

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

For Statutory Labeling information, please refer to Safety Data Sheet.