

TECHNICAL DATA SHEET

Energy Curable Resins

EBECRYL® 110

Ethoxylated Phenol Acrylate

INTRODUCTION

EBECRYL 110 is a monofunctional reactive diluent characterized by low viscosity and relatively low odor. EBECRYL 110 is used in ultraviolet light (UV) or electron beam (EB) cured coatings to control viscosity and increase flexibility.

PERFORMANCE HIGHLIGHTS

EBECRYL 110 is characterized by:

- Low viscosity
- Reduced odor relative to 2-Phenoxyethyl acrylate
- Excellent diluency
- High refractive index

UV/EB curable formulated products containing EBECRYL 110 are characterized by:

- Good flexibility
- Higher refractive index

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

SUGGESTED APPLICATIONS

EBECRYL 110 is recommended as a reactive diluent for:

- Coatings and screen inks on flexible and semi-rigid plastics including polyolefins
- Optical fiber coatings
- High refractive index coatings

SPECIFICATIONS ⁽¹⁾	VALUE
Acid value, mg KOH/g, max.	1
Appearance	Clear liquid
Color, Gardner scale, max.	5
Viscosity, 25°C, cP/mPa·s	13-27

TYPICAL PHYSICAL PROPERTIES

Density, g/ml at 25°C	1.12
Flash point, Setaflash, °C	>100
Formula weight	236
Refractive index (n _D at 20°C)	1.505
Vapor pressure, mm Hg at 20°C	<0.03

CHEMICAL ABSTRACT SERVICE NUMBER

56641-05-5

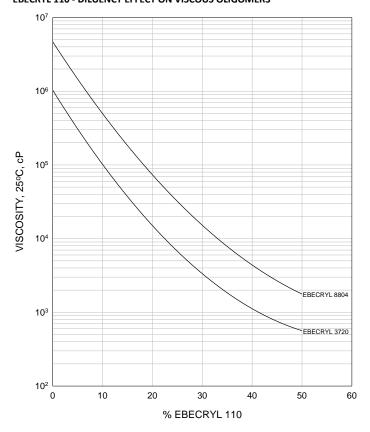
2-Propenoic acid, 2-phenoxyethyl ester

VISCOSITY REDUCTION

Graph I shows the viscosity reduction of two EBECRYL oligomers when blended with an increasing weight percent of EBECRYL 110. EBECRYL $3720^{(1)}$ is a bisphenol A based epoxy diacrylate. EBECRYL $8804^{(1)}$ is an aliphatic urethane diacrylate.

GRAPH I

EBECRYL 110 - DILUENCY EFFECT ON VISCOUS OLIGOMERS



STORAGE AND HANDLING

Before using EBECRYL 110, consult the **Safety Data Sheet** for additional information on safety and handling procedures, and recommended personal protective equipment.

The recommended storage temperature for EBECRYL 110 is 4°C to 40°C (39°F to 104°F). 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.

PRECAUTIONS

Avoid contact with eyes, skin and clothing. Direct contact with this material may cause mild eye and skin irritation. Repeated or prolonged dermal contact may cause allergic skin reactions. Wash thoroughly after handling. Use with adequate ventilation. Keep container closed.

Please refer to the **Guide to Safety, Health and Handling of Acrylate Oligomers and Monomers** for additional information on the safe handling of acrylates.

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