

EBECRYL® 571

Diluted Polyester Oligomer

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INTRODUCTION

EBECRYL 571 is a diluted polyester resin for narrow web shrink sleeve applications. It exhibits excellent adhesion, high flexibility, and superb shrink performance. For optimum performance EBECRYL 571 should be the dominant resin in the heat shrink ink formulation. EBECRYL 571 contains dipropylene glycol diacrylate (DPGDA)⁽¹⁾ monomer.

PERFORMANCE HIGHLIGHTS

EBECRYL 571 is characterized by:

- Moderate viscosity
- High reactivity

UV cured products containing EBECRYL 571 are characterized by the following performance properties:

- Excellent adhesion to shrink PVC, PET-G, SBS and PLA
- Excellent shrink properties
- Shrink and contour without discoloration
- Excellent wrinkle resistance

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

SUGGESTED APPLICATIONS

UV/EB curable products containing EBECRYL 571 may be applied by flexographic, screen, gravure, direct or reverse roll, and curtain coating methods. EBECRYL 571 is recommended for:

- Flexographic inks and coatings for shrink sleeve applications

SPECIFICATIONS

	VALUE
Appearance	Clear liquid

TYPICAL PHYSICAL PROPERTIES

	VALUE
Acid value, mg KOH/g	<5
Color, Gardner scale	<2
Density, g/ml at 25°C	1.14
Refractive index, 25°C	1.5069
Surface tension, dynes/cm	39
Viscosity, 25°C, cP/mPa·s	~9000

TYPICAL CURED PROPERTIES⁽²⁾

Tensile strength, psi (MPa)	1160 (8.0)
Elongation at break, %	20
Young's modulus, psi (MPa)	80000 (552)
Glass transition temperature, °C ⁽³⁾	44

VISCOSITY REDUCTION

EBECRYL 571 can be further diluted with DPGDA or other reactive monomers such as, 1,6-hexanediol diacrylate (HDDA)⁽¹⁾, tripropylene glycol diacrylate (TPGDA)⁽¹⁾, trimethylolpropane ethoxy triacrylate (TMPEOTA)⁽¹⁾, trimethylolpropane triacrylate (TMPTA)⁽¹⁾, or EBECRYL 40⁽¹⁾. Although viscosity reduction can be achieved with non-reactive solvents, reactive diluents are preferred because they are essentially 100 percent converted during UV/EB exposure to form a part of the coating or ink, thus reducing solvent emissions. The specific reactive diluents used will influence performance properties such as hardness and flexibility.

PRECAUTIONS

Before using EBECRYL 571, see the Safety Data Sheet (SDS) for information on the identified hazards of the material and the recommended personal protective equipment and procedures.

STORAGE AND HANDLING

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. Wash thoroughly after handling. Keep container tightly closed. Use with adequate ventilation.

See the SDS for the recommended storage temperature range for EBECRYL 571.

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

(1) Product of allnex

(2) UV cured 125 μ thick films.

(3) Measured by Differential Thermal Analysis, max. tan δ

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