TECHNICAL DATASHEET

EBECRYL® 1710

Diluted Acrylic Polymer

March 2017

EBECRYL® UV/EB Energy Curable Resins

INTRODUCTION

EBECRYL 1710 is an acrylic polymer diluted 60% by weight with the reactive diluent 1,6-hexanediol diacrylate (HDDA)[(1)]. EBECRYL 1710 is used as the primary or a modifying oligomer in ultraviolet light (UV) or electron beam (EB) curable formulations to improve film properties such as adhesion and lay-down.

PERFORMANCE HIGHLIGHTS

EBECRYL 1710 is characterized by:

- Moderate viscosity
- Low color

UV/EB cured products containing EBECRYL 1710 are characterized by the following performance properties:

- Improved adhesion
- Reduced film defects
- Good exterior durability

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

Formulated UV/EB curable products containing EBECRYL 1710 may be applied via offset and screen printing as well as direct or reverse roll, offset gravure, metering rod, slot die, knife over roll, air knife, curtain and immersion coating methods. EBECRYL 1710 is recommended for use in:

- Silk screen inks
- Coatings on plastics such as polycarbonate, polyester, polyolefins, and PVC

Typical use level is 20-60% by weight of the total formulation. EBECRYL 1710 exhibits excellent compatibility with most acrylates.

VISCOSITY REDUCTION

Graph I illustrates the change in viscosity of EBECRYL 1710 with increasing temperature.

SPECIFICATIONS	VALUE
Appearance	Clear liquid
Color, Gardner scale, max.	1
Viscosity, 25°C, cP/mPa·s	24050-27950

TYPICAL PHYSICAL PROPERTIES

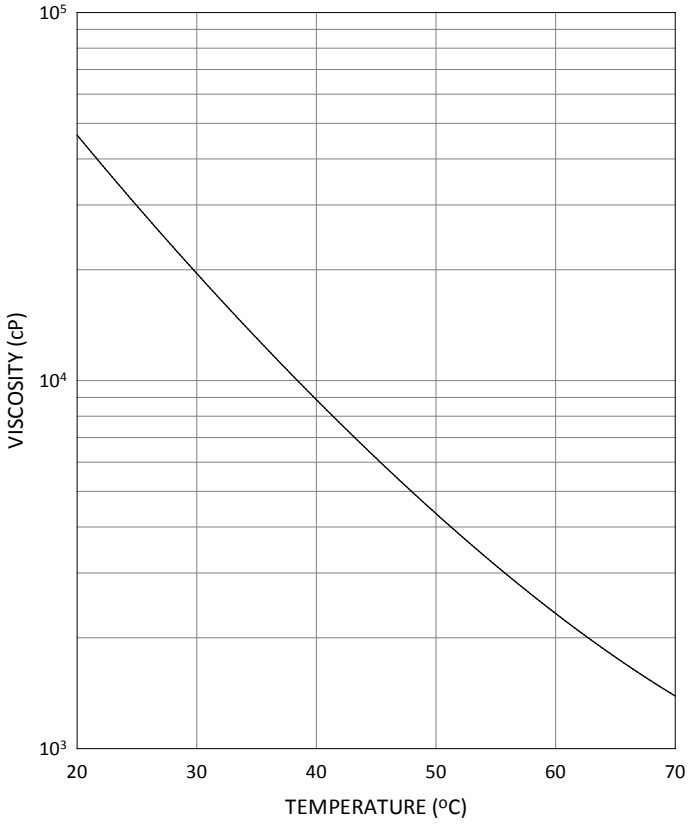
Density, g/ml at 25°C	1.07
HDDA, % by weight	60

TYPICAL CURED PROPERTIES[(2)]

Tensile strength, psi (MPa)	6440 (44)
Elongation at break, %	3.6
Young's modulus, psi (MPa)	315000 (2172)
Glass transition temperature, °C[(3)]	82

GRAPH I

EBECRYL 1710
Viscosity vs. Temperature



(1) Product of allnex
(2) UV cured 125 µ thick films.
(3) Determined by Dynamic Mechanical Analysis.

PRECAUTIONS

Before using EBECRYL 1710, 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 1710.

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

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