

EBECRYL® 812

Polyester Acrylate

March 2017



INTRODUCTION

EBECRYL 812 is an ultraviolet light (UV) or electron beam (EB) curable polyester acrylate. Its low viscosity and outstanding color development properties make this product ideal for high pigment content, low viscosity flexo inks. Inks made using this vehicle have excellent adhesion to a variety of substrates common to flexo printing.

PERFORMANCE HIGHLIGHTS

- Suitable for producing color concentrates via 3-roll mill
- Produces strong, clean, and transparent color when pigmented
- Excellent adhesion to substrates including polystyrene (PS), biaxially oriented polypropylene (BOPP), styrene butadiene styrene (SBS) and smooth, high gloss and cast-coated paper stock
- Rapid cure response.

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

EBECRYL 812 is recommended as a pigment grind vehicle for flexographic inks. Inks based on this oligomer are useful in the narrow web tag and label market as well as the mid web folding carton market.

SPECIFICATIONS

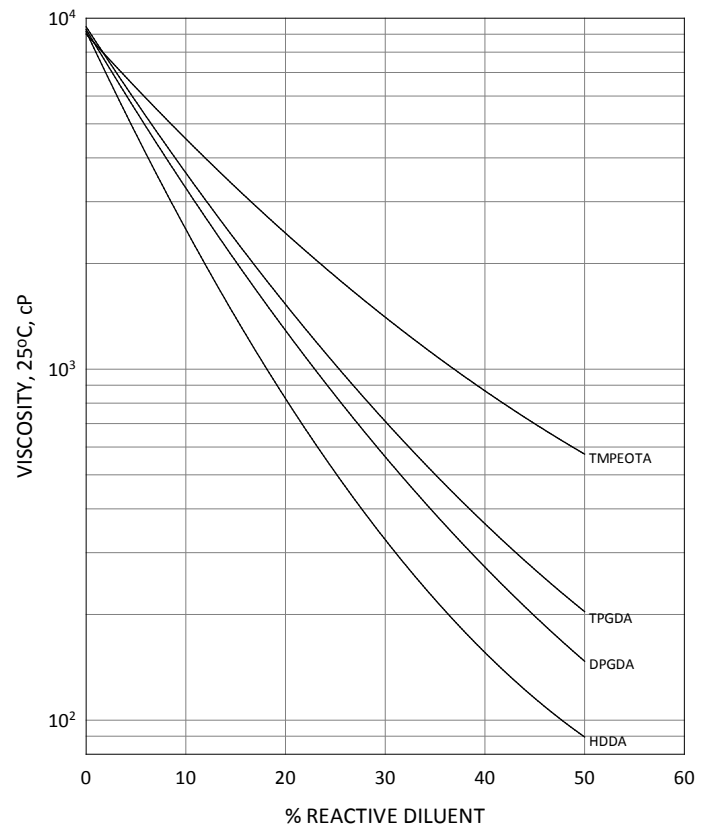
	VALUE
Acid value, mg KOH/g, max.	9
Appearance	Clear liquid
Color, Gardner scale, max.	3
Viscosity, 60°C, cP/mPa-s	280-390

TYPICAL PROPERTIES

Density, g/ml at 25°C	1.14
Flash point, °C (est.)	>100
Functionality, theoretical	3.5

GRAPH I

EBECRYL 812 - VISCOSITY REDUCTION WITH REACTIVE DILUENTS



VISCOSITY REDUCTION

Graph I shows the viscosity reduction of EBECRYL 812 with dipropylene glycol diacrylate (DPGDA)⁽¹⁾, 1,6-hexanediol diacrylate (HDDA)⁽¹⁾, trimethylolpropane ethoxy triacrylate (TMPEOTA)⁽¹⁾, and tripropylene glycol diacrylate (TPGDA)⁽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 812, 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 812.

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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