

EBECRYL® 820

Polyester Hexaacrylate

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INTRODUCTION

EBECRYL 820 is a low viscosity polyester acrylate oligomer, with exceptional pigment wetting properties. This combined with the low viscosity of this material makes it ideal as a pigment grinding resin. EBECRYL 820 also gives a fast cure response when formulated with other oligomers and cured via ultraviolet light (UV) or electron beam (EB). EBECRYL 820 is used for the preparation of pigment pastes with high pigment loading. This can be produced using a triple roll mill or bead mill. EBECRYL 820 can be used for grinding all process colors and spot colors. EBECRYL 820 has been specifically developed to formulate UV/EB curable inks for sensitive applications such as food packaging.

PERFORMANCE HIGHLIGHTS

EBECRYL 820 is characterized by:

- Low viscosity
- Excellent pigment wetting properties
- Good cure response

The ability to produce high pigment loading pigment pastes allows the ink formulator more latitude in formulating, as less pigment paste is required to achieve a given optical density

TYPICAL 3-ROLL MILL PIGMENT PASTE FORMULATIONS

	Yellow	Magenta	Cyan
EBECRYL 820	52.8	49.5	47.3
Stabilizer	1	1	1
Solsperse® 22000 ⁽¹⁾	1.7		
Solsperse 5000 ⁽¹⁾			1.1
Solsperse 39000 ⁽¹⁾	4.5		
Solsperse 24000 ⁽¹⁾		4.5	5.6
Pigment DGR	40		
Pigment 4 BY		45	
Pigment GLO			45

The properties of UV/EB cured formulations also depend on other components such as reactive diluent(s), additives and photoinitiators.

SUGGESTED APPLICATIONS

High loading pigment paste formulations prepared using EBECRYL 820 may be used in the production of UV/EB curable inks intended for use in flexography, lithography, gravure or potentially ink-jet.

EBECRYL 820 is recommended for use in flexographic inks and coating for indirect food packaging and related applications.

(1) Product of Lubrizol Corp.

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SPECIFICATIONS

	VALUE
Appearance	Clear liquid
Color, Gardner scale, max.	10

TYPICAL PHYSICAL PROPERTIES

Acid value, mg KOH/g	~4
Density, g/ml at 25°C	1.16
Flash point, Setflash, °C	>100
Functionality, theoretical ⁽⁴⁾	6
Viscosity, 25°C, cP/mPa·s	~550

PRECAUTIONS

Before using EBECRYL 820, 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 820.

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