

EBECRYL® 452

Polyester Acrylate Oligomer

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INTRODUCTION

EBECRYL 452 is a low viscosity polyester acrylate oligomer that exhibits exceptional pigment wetting properties making it an ideal pigment grinding resin. EBECRYL 452 also gives a fast cure response when formulated with other oligomers and cured via ultraviolet light (UV) or electron beam (EB). EBECRYL 452 is used for the preparation of highly loaded pigment pastes produced using 3-roll or bead mills. EBECRYL 452 can be used for grinding all process colors and spot colors.

PERFORMANCE HIGHLIGHTS

EBECRYL 452 is characterized by:

- Low viscosity
- Excellent pigment wetting properties

UV/EB curable formulated products containing EBECRYL 452 are characterized by:

- Good cure response

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

SUGGESTED APPLICATIONS

The ability to produce highly loaded 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 452	53.3	50.0	47.8
Solsperse® 22000 ⁽¹⁾	1.7		
Solsperse 5000 ⁽¹⁾			1.1
Solsperse 39000 ⁽¹⁾	4.6		
Solsperse 24000 ⁽¹⁾		4.5	5.7
Irgalite® Yellow BAW ⁽²⁾	40.4		
Irgalite Rubine L4BD ⁽²⁾		45.5	
Irgalite Blue GLO ⁽²⁾			45.4

(1) Product of Lubrizol Corp.

(2) Product of BASF

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SPECIFICATIONS

	VALUE
Acid value, mg KOH/g, max.	10
Appearance	Clear dark liquid
Viscosity, 25°C, cP/mPa·s	400-1000

TYPICAL PHYSICAL PROPERTIES

Density, g/ml at 25°C	1.18
Flash point, Setaflash, °C	>100
Functionality, theoretical ⁽⁴⁾	4

PRECAUTIONS

Before using EBECRYL 452, 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 452.

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