

# EBECRYL<sup>®</sup> 452

## Polyester Acrylate Oligomer

### 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	52.8	49.5	47.3
ADDITOL S 120 <sup>(1)</sup>	1.0	1.0	1.0
Solsperse <sup>®</sup> 22000 <sup>(2)</sup>	1.7		
Solsperse 5000 <sup>(2)</sup>			1.1
Solsperse 39000 <sup>(2)</sup>	4.5		
Solsperse 24000 <sup>(2)</sup>		4.5	5.6
Irgalite <sup>®</sup> Yellow BAW <sup>(3)</sup>	40.0		
Irgalite Rubine L4BD <sup>(3)</sup>		45.0	
Irgalite Blue GLO <sup>(3)</sup>			45.0

### TYPICAL PHYSICAL PROPERTIES

Acid value, mg KOH/g	<20
Appearance	Clear liquid
Density, g/ml at 25°C	1.18
Flash point, Setaflash, °C	>100
Functionality, theoretical <sup>(4)</sup>	4
Viscosity at 25°C, cP	600

### STORAGE AND HANDLING

Before using EBECRYL 452, consult the **Material Safety Data Sheet** for additional information on safety and handling procedures, and recommended personal protective equipment.

The recommended storage temperature for EBECRYL 452 is 4°C to 40°C (39°F to 104°F). 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.

### PRECAUTIONS

Avoid contact with eyes, skin and clothing. Direct contact with this material may cause moderate eye and mild skin irritation. Repeated or prolonged dermal contact may cause allergic skin reactions. Wash thoroughly after handling. Use with adequate ventilation. Keep container closed.

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

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