

MODIFIED POLYESTER OLIGOMER

INTRODUCTION

EBECRYL® 411 is specially designed for low viscous inks and coatings applied on non-pretreated OPP films. This makes it suitable for liquid inks such as flexo, digital or gravure inks.

EBECRYL® 411 is a modified polyester resin diluted with 40% of dipropylene glycol diacrylate (DPGDA) monomer.

EBECRYL® 411 can also be used to create opaque white with rotary screen or flexo applications.

SUGGESTED APPLICATIONS

UV/EB curable formulations containing EBECRYL® 411 may be applied by diverse application methods like flexographic, screen, gravure, direct or reverse roll, and curtain coating methods.

However EBECRYL® 411 is particularly recommended for:

- Flexographic and rotary screen inks and coatings for non-pretreated OPP substrates.

PERFORMANCE HIGHLIGHTS

EBECRYL® 411 is characterized by:

- Low viscosity
- Good pigment wetting

UV/EB cured formulations based on EBECRYL® 411 are characterized by the following performance properties:

- Good adhesion on non-pretreated OPP.
- High reactivity.
- Good printability

The actual properties of UV/EB cured products also depend on the selection of the other formulation components, such as reactive diluent(s), additives and photo initiators.

TYPICAL VALUE

Dynamic viscosity at 25°C, mPa.s ± 1300

PHYSICAL PROPERTIES

Density, g/cm³ 1.11
DPGDA, % by weight 40

TYPICAL CURED PROPERTIES

Tensile strength, MPa 3.5
Tensile elongation, % 40
Young Modulus, MPa 37
T_g, °C (by DHTA- max tg δ) 30

VISCOSITY REDUCTION

EBECRYL® 411 can be further diluted with reactive monomers such as dipropylene glycol diacrylate (DPGDA)⁽¹⁾, 1,6-hexanediol diacrylate (HDDA)⁽¹⁾, tripropylene glycol diacrylate (TPGDA)⁽¹⁾, trimethylolpropane triacrylate (TMPTA)⁽¹⁾, EBECRYL® 160⁽¹⁾ or EBECRYL® 40⁽¹⁾. The specific reactive diluent(s) used will influence performance properties such as hardness and flexibility.

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STORAGE AND HANDLING

Care should be taken not to expose radiation curable products to temperatures exceeding 40°C for prolonged periods or to direct sunlight. This might cause uncontrollable polymerization of the product with generation of heat.

Storage and handling should be in stainless steel, amber glass, amber polyethylene or baked phenolic lined containers. Do not store this material under an oxygen free atmosphere. Use dry air to displace material removed from the container. This material should not be stored for more than 2 years.

PRECAUTION

The following is a summary of the precautions to be taken when handling this product. Please refer to the Safety Data Sheet for further details.

The toxicological properties of this material have not been fully determined. Products of this type can be expected to be eye and skin irritants and have the potential to cause sensitization or other allergic responses. Appropriate precaution should be taken to avoid eye and skin contact and to avoid inhalation of aerosols or vapours containing this product. Consult the relevant Safety Data Sheet for appropriate handling procedures and protective equipment prior to using this or any other material referred to in this bulletin.

See Safety Data Sheet for emergency and first aid procedure

STATUTORY LABELING

For Statutory Labeling information, please refer to Safety Data Sheet.