

EBECRYL® LED 03 belongs to the ECOWISE CHOICE product range for the industrial wood market.

AMINE MODIFIED POLYETHER ACRYLATE

INTRODUCTION

EBECRYL® LED 03 is a low viscosity amine modified polyether acrylate oligomer that can be added as a co-resin to UV curable formulations. EBECRYL® LED 03 – when combined with an appropriate photoinitiator system – transforms formulations into UV LED, UVA, or low energy curable systems by providing improved surface cure. In addition, this effect is also seen in high energy cure formulations. The improved surface cure is obtained by mitigating oxygen inhibition of the free radical process and/or by being an amine synergist for Norrish type II photo initiators.

Coating and inks based on EBECRYL® LED03 exhibit a low odor after UV or EB curing.

PERFORMANCE HIGHLIGHTS

EBECRYL® LED 03 is characterized by:

- Low viscosity
- Transparent liquid appearance

UV/EB cured products based on EBECRYL® LED 03 are characterized by the following performance properties:

- Good (surface) cure response
- Good flexibility
- Adhesion promotion
- High gloss
- Low odor
- Low migration potential

The actual properties of UV/EB cured products also depend on the selection of other formulation components such as the main binder, reactive diluents, additives and photo initiator system.

SUGGESTED APPLICATION

EBECRYL® LED 03 is recommended as a co-resin (5-20 w% on formulation) to increase surface cure of formulations for overprint varnishes, coatings, flexographic-, gravure-, screen- and inkjet inks that are cured with UV LED, UVA or low energy lamps.

TYPICAL VALUES

Appearance	Clear liquid
Color, Gardner scale	< 1
Density, g/cm ³ at 25°C	1.03
Acrylate Functionality (theoretical)	2
Molecular weight, g/mol	1300
Nitrogen content, %	4.5
Viscosity at 25°C, mPa.s	450

COMPATIBILITY

EBECRYL® LED 03 is compatible with a broad range of selected resins of different chemical families, such as urethane acrylates, polyester acrylates, and epoxy acrylates. EBECRYL® LED 03 is also compatible with alkali additives.

However, EBECRYL® LED 03 is not compatible with all resins, and this should be checked prior to use. Acidic resins, such as some adhesion promoters, should not be used in combination with EBECRYL® LED 03 as all advantage will be eliminated when quaternary ammonium salts are formed.

STORAGE AND HANDLING

Before using EBECRYL® LED 03, consult the Material Safety Data Sheet for additional information on hazards, handling procedures, and recommended protective equipment.

The recommended storage temperature for EBECRYL® LED 03 is 4°C to 40°C. 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. EBECRYL® LED 03 should be used within 2 years after production.

PRECAUTION

Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Direct contact with this material may cause minimal eye and skin irritation. Contact with skin may cause a cross-allergic reaction in persons already sensitized to acrylate materials. Wash thoroughly after handling. Keep container tightly closed. Use with adequate ventilation.

STATUTORY LABELING

Please refer to Safety Data Sheet.