TECHNICAL DATASHEET

EBECRYL® UV/EB Energy Curable Resins

EBECRYL® LEO 10502

Polymeric Tetrafunctional Polyether Acrylate
Produced following Good Manufacturing Practices (GMP)

March 2017

INTRODUCTION

EBECRYL LEO 10502 is a low viscosity polymeric tetrafunctional polyether acrylate that provides low extractables, low odor and low migration after UV or EB curing.

EBECRYL LEO 10502 is recommended for use in low odor and low migrating UV/EB curable overprint varnishes (OPV's) and inks.

PERFORMANCE HIGHLIGHTS

EBECRYL LEO 10502 is characterized by:

- Low viscosity
- Low odor
- High cure response

UV/EB cured products based on EBECRYL LEO 10502 are characterized by the following performance properties:

- Good hardness
- Good solvent resistance
- High gloss
- Low extractables
- Low odor
- Low migration

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

SUGGESTED APPLICATIONS

EBECRYL LEO 10502 is recommended as the reactive oligomer for low extractable, low odor overprint varnishes and flexographic inks for indirect food packaging and related applications. It is also suitable for screen and gravure application.

MUTAGENICITY ASSESSMENT

The following mutagenicity studies have been conducted in compliance with Good Laboratory Practice standards and according to the specific OECD Guidelines for Testing of Chemicals as follows:

- Ames test – OECD 471
- Micronucleus test in the mouse – OECD 474

In conclusion, on the basis of the weight of the evidence of two mutagenicity test results (including one in-vivo test), EBECRYL LEO 10502 is considered non-genotoxic (more information available on request).

SPECIFICATIONS

SPECIFICATIONS	VALUE
Appearance	Clear liquid
Acid value, mg KOH/g, max.	5
Acrylic acid, ppm, max.	200
Color, Gardner scale, max.	2
Residual solvent, ppm, max.	10
Viscosity, 25°C, cP/mPa·s	145-220

TYPICAL PROPERTIES

Density, g/ml at 25°C	1.15
Functionality, theoretical	3.6
Hydroxyl value, mg KOH/g	~10
Molecular weight, g/mol	760

PRECAUTIONS

Before using EBECRYL LEO 10502, 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 LEO 10502.

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

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