TECHNICAL DATASHEET

EBECRYL® UV/EB Energy Curable Resins

EBECRYL® LEO 10552

Amine Modified Polyether Acrylate
Produced following Good Manufacturing Practices (GMP)

March 2018

INTRODUCTION

EBECRYL LEO 10552 is a low viscosity amine modified polyether acrylate oligomer that provides low extractables, low odor and low migration after UV or EB curing.

EBECRYL LEO 10552 is recommended for use in low odor and low migrating UV overprint varnishes (OPV's) and inks for indirect food packaging applications.

PERFORMANCE HIGHLIGHTS

EBECRYL LEO 10552 is characterized by:

- Low viscosity

UV/EB cured products based on EBECRYL LEO 10552 are characterized by the following performance properties:

- Good cure response
- Good flexibility
- High gloss
- Low extractables
- Low odor
- Low migration

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

SUGGESTED APPLICATIONS

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

MUTAGENICITY ASSESSMENT

The following mutagenicity study has been conducted on EBECRYL LEO 10552 in compliance with Good Laboratory Practice standards and according to the specific OECD Guidelines for Testing of Chemicals as follows:

- Ames test – OECD 471

No significant increases in the frequency of revertant colonies were found for any of the bacterial strains, either with or without metabolic activation. This material was found to be nonmutagenic under the conditions of this study. The mutagenicity behavior of an acrylate with a structure similar to that of EBECRYL LEO 10552 has also been examined and, after extensive testing, was found to be nonmutagenic. The weight of evidence of all findings on the "acrylates" category indicates that the acrylates are not mutagenic. We use these category effects to substitute for testing on acrylates. This is consistent with contemporary strategies (compliant with REACH) to minimize the toxicological testing of animals and utilize alternative methods to establish the safety of industrial chemicals (more information available upon on request).

SPECIFICATIONS	VALUE
Appearance	Clear liquid
Color, Gardner scale, max.	3
Viscosity, 25°C, cP/mPa·s	350-650

TYPICAL PROPERTIES	VALUE
Density, g/ml at 25°C	1.12
Functionality, theoretical	3.5
Molecular weight, g/mol	1000
Residual amine, ppm	<1000
Residual acrylic acid, ppm	<200
Residual solvent, ppm	<100
Weight/amine, theoretical	1438

PRECAUTIONS

Before using EBECRYL LEO 10552, 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 10552.

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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