TECHNICAL DATASHEET

# EBECRYL® LEO 10501

EBECRYL® UV/EB Energy Curable Resins

## Trifunctional Diluting Acrylate
## Produced following Good Manufacturing Practices (GMP)

March 2017

## INTRODUCTION

EBECRYL LEO 10501 is a trifunctional diluting acrylate that provides low extractables, low odor and low migration after UV or EB curing. It is compatible with a wide range of acrylated resins, and does not contain any intentionally added organic tin compounds, heavy metals*, hydroquinone (HQ) or methyl ether of hydroquinone (MEHQ). (Please note that quinones are present in many raw materials, so the overall quinone content is reduced, but not zero in EBECRYL LEO 10501.)

EBECRYL LEO 10501 can be used to produce low odor and low migrating UV overprint varnishes (OPV's) and inks for indirect food contact applications. It also has utility as a viscosity reducer in applications that require no/low tin, heavy metals, and quinone content.

## PERFORMANCE HIGHLIGHTS

EBECRYL LEO 10501 is characterized by:

- No intentionally added tin, heavy metals*, or quinones
- Low viscosity

UV/EB cured products based on EBECRYL LEO 10501 are characterized by the following performance properties:

- Regulation friendly for tin, heavy metals*, and quinones
- 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 10501 is specially recommended to formulate low extractable and low odor UV/EB curable OPV's and inks for flexography, lithography and screen applications. It is also recommended as a viscosity reducer in applications that must meet regulations for tin, heavy metal*, and quinone content.

**As defined by C.O.N.E.G's Toxic in Packaging Legislation, the ASTM Standard Consumer Safety Specification on Toy Safety F 963 (ASTM F 963-08), or the European Standard on Safety of Toys EN 71-3:2013.*

| SPECIFICATIONS | VALUE |
|---|---|
| Appearance | Clear liquid |
| Acrylic acid, ppm, max. | 200 |
| Color, Pt-Co scale(1), max. | 150 |
| Residual solvent, ppm, max. | 100 |
| Viscosity, 25°C, cP/mPa·s | 60-80 |

| TYPICAL PROPERTIES | |
|---|---|
| Density, g/ml at 25°C | 1.10 |
| Functionality, theoretical | 3 |
| Hydroxyl value, mg KOH/g | <5 |
| Molecular weight, g/mol | 470 |
| HQ/MEHQ Content, ppm | nd/6(2) |

## 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
- Mouse lymphoma assay – OECD 476
- Micronucleus test in the mouse – OECD 474

In conclusion, on the basis of the weight of the evidence of available mutagenicity test results, EBECRYL LEO 10501 is considered a nongenotoxic product (more information available on request).

## PRECAUTIONS

Before using EBECRYL LEO 10501, 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 10501.

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

*(1) Also referred to as APHA color.*
*(2) Amount detected via HPLC with a UV detector (nd = none detected).*

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