

MODIFIED EPOXY ACRYLATE  
 PRODUCED FOLLOWING GOOD MANUFACTURING PRACTICES (GMP)

### INTRODUCTION

EBECRYL® LEO 10601 is a modified epoxy acrylate that provides low extractables and low odor after UV or EB curing.

EBECRYL® LEO 10601 exhibits good pigment wetting properties and produces UV offset inks exhibiting enhanced ink-water balance and low misting.

EBECRYL® LEO 10601 can also be used to produce UV flexo inks with good flow, high gloss and high reactivity.

### PERFORMANCE HIGHLIGHTS

EBECRYL® LEO 10601 is characterized by:

- Low epoxy content
- Low irritancy
- Compliance with European regulations for food contact applications (SCF L 1-4 Synoptic 7)

UV/EB cured products based on EBECRYL® LEO 10601 are characterized by the following performance properties:

- High gloss
- Improved flexibility
- Low extractables
- Low odor
- Low migration
- In UV offset lithography
  - Good pigment wetting
  - Improved ink water balance
  - Good viscosity/tack relationship
  - Reduced misting
- In UV flexo
  - Good pigment wetting (especially for carbon black)
  - High reactivity
  - Flexibility

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

### SUGGESTED APPLICATIONS

EBECRYL® LEO 10601 is recommended as the main oligomer for low extractable, low odour overprint varnished and as the letdown for flexographic ink for indirect food packaging and related applications.

It is also suitable for screen and gravure applications.

### SPECIFICATIONS

|                           |              |
|---------------------------|--------------|
| Acid value, mg KOH/g      | max. 1.0     |
| Appearance                | Clear liquid |
| Color, Gardner scale      | max. 3       |
| Viscosity, 60°C, cP/mPa.s | 1400 - 2500  |

### TYPICAL PROPERTIES

|                                   |        |
|-----------------------------------|--------|
| Density (60°C), g/cm <sup>3</sup> | 1.14   |
| Epoxy content, %                  | 0.05   |
| Functionality, theoretical        | 2      |
| Residual acrylic acid, ppm        | < 750  |
| Viscosity, 25°C, cP/mPa.s         | 200000 |

### MUTAGENICITY ASSESSMENT

The following mutagenicity study has been conducted on EBECRYL® LEO 10601 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 behaviour of an acrylate with a structure similar to that of EBECRYL® LEO 10601 has also been examined and 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.

### VISCOSITY REDUCTION

EBECRYL® LEO 10601 can be diluted with the low extractable, low odor diluting acrylates such as EBECRYL® LEO 10501, EBECRYL® LEO 10502 and/or with the amine modified polyether acrylates EBECRYL® LEO 10551, EBECRYL® LEO 10552 and EBECRYL® LEO 10553, all products from allnex.

### STORAGE AND HANDLING

Before using EBECRYL® LEO 10551, consult the Material Safety Data Sheet for additional information on hazards, handling procedures, and recommended protective equipment.

The recommended storage temperature for EBECRYL® LEO 10551 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® LEO 10551 should be used within 2 years after production.

### PRECAUTIONS

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.