EBECRYL® 1259

Technical Datasheet

URETHANE ACRYLATE OLIGOMER

INTRODUCTION

EBECRYL® 1259 is an acrylated aliphatic urethane oligomer diluted with 35% of hydroxy propyl methacrylate (HPMA), specifically designed for use in solder resist coatings on printed circuit boards and may be cured by ultraviolet light (UV) or electron beam (EB).

PERFORMANCE HIGHLIGHTS

EBECRYL® 1259 is characterized by:

- Light colour
- Low viscosity

UV/EB cured products based on EBECRYL® 1259 are characterized by the following performance properties:

- Improved flexibility
- Good heat resistance

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

SUGGESTED APPLICATIONS

Formulated UV/EB curable products containing EBECRYL® 1259 may be applied by lithographic, screen, gravure, direct or reverse roll, and curtain coating methods.
EBECRYL® 1259 is recommended for use in:

- Solder resists with improved adhesion and flexibility on tin - lead
- Thick film casting

TYPICAL VALUES

Höppler viscosity at 25°C, mPa.s	± 12000
Colour, Gardner	max. 2

PHYSICAL PROPERTIES

Density, g/cm^3	1.07
Molecular weight, theoretical	2000
Functionality, theoretical	3
Polymer solids, % by weight	65
HPMA, % by weight	35

VISCOSITY REDUCTION

EBECRYL® 1259 can be diluted with reactive monomers such as trimethylolpropane triacrylate (TMPTA)[1] and EBECRYL® 109[1]. The specific reactive diluent(s) used will influence performance properties such as hardness and flexibility.

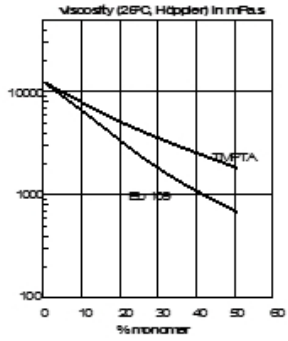
[1] product of allnex

TYPICAL CURED PROPERTIES

Tensile strength, MPa[2]	25
Tensile elongation, %[2]	99
Glass transition temperature, °C	43

[2] Measured on a 125 µm UV cured film.

The graph shows the viscosity reduction of EBECRYL® 1259 as a function of the concentration of different monomers.



STORAGE AND HANDLING

Care should be taken not to expose radiation curable products to temperatures exceeding 40°C for prolonged periods or to direct sunlight. This might cause uncontrollable polymerization of the product with generation of heat.
Storage and handling should be in stainless steel, amber glass, amber polyethylene or baked phenolic lined containers. Do not store this material under an oxygen free atmosphere. Use dry air to displace material removed from the container. This material should not be stored for more than 2 years.

PRECAUTION

The following is a summary of the precautions to be taken when handling this product. Please refer to the Safety Data Sheet for further details.
The toxicological properties of this material have not been fully determined. Products of this type can be expected to be eye and skin irritant and have the potential to cause sensitization or other allergic responses. Appropriate precautions should be taken to avoid eye and skin contact and to avoid inhalation of the aerosols or vapours. Consult the relevant Safety Data Sheet for appropriate handling procedures and protective equipment prior to using this or any other material referred to in this bulletin.
See Safety Data Sheet for emergency and first aid procedures.

STATUTORY LABELING

For Statutory Labeling information, please refer to Safety Data Sheet.