

EBECRYL® 1291

Sn-free Urethane acrylate oligomer*

INTRODUCTION

Ebecryl®1291 is a hexafunctional aliphatic urethane acrylate oligomer which provides extremely fast cure response when exposed to ultraviolet light (UV) or electron beam (EB). Cured films of Ebecryl®1291 exhibit high hardness, abrasion and solvent resistance.

PERFORMANCE HIGHLIGHTS

Ebecryl®1291 is characterized by :

- ✓ Light colour
- ✓ Excellent cure response

UV/EB cured products based on Ebecryl®1291 are characterized by the following performance properties :

- ✓ High hardness and scratch resistance
- ✓ High solvent resistance
- ✓ High gloss
- ✓ Extremely fast cure speed
- ✓ Non-yellowing properties

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®1291 may be applied by lithographic, screen, gravure, direct or reverse roll, and curtain coating methods.

Ebecryl®1291 is recommended for use in :

- ✓ Wood coatings and fillers
- ✓ Scratch resistant coatings on plastic
- ✓ Improving cure speed, solvent resistance and gloss

TYPICAL VALUES

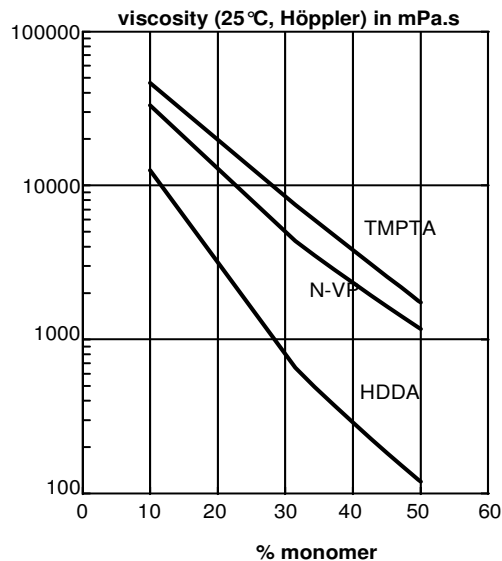
Höppler viscosity at 60°C, mPa.s	2000
Colour, Gardner	max. 1
Irritation by OECD	0

*No intentionally added organo tin

PHYSICAL PROPERTIES

Density, g/cm ³	1.19
Molecular weight, theoretical	1000
Functionality, theoretical	6
Polymer solids, % by weight	100

The graph shows the viscosity reduction of Ebecryl®1291 as a function of the concentration of different monomers.



VISCOSITY REDUCTION

Ebecryl®1291 can be diluted with reactive monomers such as 1,6 hexanediol diacrylate (HDDA)⁽¹⁾ and trimethylolpropane triacrylate (TMPTA)⁽¹⁾. The specific reactive diluent(s) used will influence performance properties such as hardness and flexibility.

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 after manufacturing date.

PRECAUTIONS

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.

(1) HDDA and TMPTA are produced by Allnex

STATUTORY LABELLING

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

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