EBECRYL® 4141

Technical Datasheet

ISOCYANATE BEARING URETHANE ACRYLATE

INTRODUCTION

EBECRYL® 4141 is an undiluted Isocyanate-bearing urethane acrylate designed for use in two-component systems for coatings on wood, plastic and metal.

SUGGESTED APPLICATIONS

Formulations with EBECRYL® 4141 can be used for

- UV and EB curable, two-component polyurethane coatings
- adhesion promoter in UV and EB curing coatings.

EBECRYL® 4141 can be combined with hydroxyl-bearing resins to formulate coatings which cure by dual-cure process (UV-induced polymerization and NCO/OH reaction).
The product is also used in pure UV-curing coatings to improve the adhesion on critical substrates as plastic, metal and exotic woods.

COMPATBILITY

EBECRYL® 4141 has good compatibility with esters, ketones and aromatic hydrocarbons such as ethyl acetate, butyl acetate, methoxypropyl acetate, acetone, methyl ethyl ketone, methyl isobutyl ketone, xylene and mixture thereof.
Only pure grade solvents should be used (max 0.05% water). EBECRYL® 4141 should not be thinned to below a non-volatile content of 40%.Prolonged storage of a solution with a lower binder content may result in turbidity, sedimentation or even gelling.
Because of the many possible combinations with thinners and solvents, the compatibility and storage stability must be tested in each individual case.

SPECIFICATIONS

Viscosity at 25°C, mPa.s	10000 ± 2500
Colour, Apha	max. 150

TYPICAL PROPERTIES

NCO content, %	12.0 ± 1
Density, g/cm³	approx 1.13

SUGGESTED FORMULATION

EBECRYL® 4141 can be thinned with standard reactive thinners (mono-, di-, tri-, or tetra-acrylates) or with solvent.
Reactive thinners and solvent containing reactive groups such as hydroxyl or amine groups strongly influence pot life and thus storage stability. Suitable solvents are esters, ketones and aromatic hydrocarbons.
Coatings containing EBECRYL® 4141 are applied by spraying, curtain coating or roller coating (cover rate max 100 g/m²). After an adequate flash-off time, they are UV-cured. The belt speed depends on the co-reactant used and on the type and amount of photo initiator added. In the case of dual-cure systems, the belt speed is normally approx 1 m/min/80W lamp.
The surface is then dust-dry and tack-free. Following UV curing, the post-reaction of NCO/OH groups takes place at room temperature or is forced. This results in the good adhesion and good mechanical and chemical resistance of the paint film.

STORAGE AND HANDLING

Storage in original sealed allnex containers.
Recommended storage temperature: -10 to 35°C
Protect from intense radiation (light, UV), heat and foreign material.
The product is sensitive to moisture. Skin formation may occur in opened containers.
allnex guarantees that for a period of 12 months following the day of manufacturing, the product will meet the specifications or values set forth in section “specifications or characteristic data” above, whatever is applicable, provided that the product is stored in full compliance with the storage conditions set forth in and referenced under section “storage” above and is otherwise handled appropriately.
The lapse of the 12 months period does not necessarily mean that the product no longer meets specifications or the set values. However, prior to using said product, Allnex recommend to test such a product if it still meets the specifications or the set values. allnex does not make any guarantees regarding the product after the lapse of the 12 months period and Allnex shall not be responsible or liable in any way for the product failing to meet specifications or the set values after the lapse of the 12 months period.

PRECAUTIONS

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