

POLYESTER ACRYLATE OLIGOMER FROM RECYCLED PET

INTRODUCTION

EBECRYL® 872 is polyester acrylate resin based on recycled PET. Films of EBECRYL® 872 cured by ultraviolet light (UV) or electron beam (EB) exhibits excellent adhesion, high toughness and flexibility. EBECRYL® 872 is recommended for use in sealers and top coats for parquet floor and furniture applications.

PERFORMANCE HIGHLIGHTS

EBECRYL® 872 is characterized by:

- Low viscosity
- Good wetting and flow with fillers
- Cost effective with reliably sourced recycled PET
- Stenomer⁽¹⁾ free/BPA free/Tin free

UV/EB cured products based on EBECRYL® 872 are characterized by the following performance properties:

- Good adhesion
- Balanced flexibility/reactivity
- Good Hamberger-Höbel/coin resistance
- Good abrasion/grit feeder resistance

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

⁽¹⁾ Chemically well-defined monomeric or multifunctional acrylates, with low molecular weight and very narrow molecular weight distribution

SUGGESTED APPLICATIONS

Formulated UV/EB curable products containing EBECRYL® 872 may be applied by direct or reverse roll coating methods. EBECRYL® 872 is recommended for use in:

- Parquet floor applications
- Furniture coatings
- Plastic coatings
- Resilient flooring

VISCOSITY REDUCTION

The viscosity of EBECRYL® 872 can be reduced with the addition of reactive diluents such as 1,6-hexanediol diacrylate (HDDA)⁽²⁾, isobornyl acrylate (IBOA)⁽²⁾, trimethylolpropane triacrylate (TMPTA)⁽²⁾ and tripropylene glycol diacrylate (TPGDA)⁽²⁾. Although viscosity reduction can be achieved with non-reactive solvents, reactive diluents are preferred because they are essentially 100 percent converted during UV/EB exposure to form a part of the coating or ink, thus reducing solvent emissions. The specific reactive diluents used will influence performance properties such as hardness and flexibility.

⁽²⁾ product of allnex

TYPICAL PHYSICAL PROPERTIES

Acid value, mg KOH/g	max. 25
Appearance	Clear to hazy liquid
Color, Gardner	max. 2
Viscosity, 25°C, mPa.s	7000

TYPICAL CURED PROPERTIES

Tensile strength, psi (MPa)	5180 (29)
Elongation at break, %	14
Young's modulus, psi (MPa)	158400 (1100)
Glass transition temperature, °C	58

PRECAUTIONS

Before using EBECRYL® 872, 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® 872.