



## TECHNICAL DATA SHEET

# EBECRYL<sup>®</sup> 8310

## Aromatic Urethane Acrylate

### INTRODUCTION

EBECRYL 8310 is an aromatic urethane diacrylate oligomer. Films of EBECRYL 8310 cured by ultraviolet light (UV) or electron beam (EB) exhibit excellent abrasion resistance combined with good flexibility, solvent resistance and adhesion to various substrates. EBECRYL 8310 is recommended for use in sealers for parquet and other wood flooring to provide outstanding abrasion resistance.

### PERFORMANCE HIGHLIGHTS

EBECRYL 8310 is characterized by:

- Light color
- Low odor

UV/EB cured products based on EBECRYL 8310 are characterized by the following performance properties:

- Excellent abrasion resistance
- Good flexibility and toughness.
- Good solvent resistance.
- Good adhesion to various substrates.

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

### SUGGESTED APPLICATIONS

Formulated UV/EB curable products containing EBECRYL 8310 may be applied by direct or reverse roll. EBECRYL 8310 is recommended for use in:

- Sealers for parquet and other wood flooring
- Coatings on rigid and flexible plastics

### VISCOSITY REDUCTION

EBECRYL 8310 can be reduced in common reactive diluents such as dipropylene glycol diacrylate (DPGDA)<sup>(1)</sup>, octyl/decyl acrylate (ODA-N)<sup>(1)</sup>, propoxylated glycerol triacrylate, (OTA-480)<sup>(1)</sup>, trimethylolpropane triacrylate (TMPTA)<sup>(1)</sup>, and tripropylene glycol diacrylate (TRPGDA)<sup>(1)</sup>. Although viscosity reduction can be achieved with non-reactive solvents, reactive diluents are usually preferred because they are essentially 100 percent converted during UV/EB exposure to form a part of the coating or ink, thus avoiding solvent emissions. The specific reactive diluents used will influence performance properties such as hardness and flexibility.

### TYPICAL PROPERTIES

	Value
Color, Gardner scale	<2
Density, g/cm <sup>3</sup>	1.1
Functionality, theoretical	2
TPGDA, % by weight	5
Viscosity at 25°C, cP	~5500

### TYPICAL CURED PROPERTIES<sup>(2)</sup>

	Value
Tensile strength, psi	1400
Tensile elongation, %	42
Young Modulus, psi	9200
Glass transition temperature, °C	32

### STORAGE AND HANDLING

Before using EBECRYL 8310, consult the **Material Safety Data Sheet** for additional information on safety and handling procedures, and recommended personal protective equipment.

The maximum recommended storage temperature for EBECRYL 8310 is 38°C (100°F). High temperature and fire conditions can cause uncontrolled polymerization with rapid evolution of heat and pressure rise, which may result in violent rupture of the storage tanks or containers. Never store in direct sunlight or adjacent to heated compartments. Containers should be kept closed and away from oxidizing agents, acids, alkalies, peroxides, free radical initiators, photosensitizers, rust, and x-ray or ultraviolet radiation. Procedures that displace oxygen from the material, such as sparging with nitrogen, should be avoided.

### PRECAUTIONS

Avoid contact with skin and eyes and breathing vapors. Contains materials that may cause injury to the eyes and skin. Sensitization may occur. Skin irritation may not occur immediately and contact may go unnoticed for up to 48 hours. Solvents should not be used to clean skin because of increased penetration potential. Contaminated clothing, shoes, belts and other leather goods should be removed immediately. Incinerate contaminated leather goods, including shoes. Wash contaminated clothing thoroughly before reuse.

Please refer to the **Cytec Guide to Safety, Health and Handling of Acrylate Oligomers and Monomers** for additional information on the safe handling of acrylates.

(1) Product of Cytec Industries Inc..

(2) Measured on a 80 µm EB cured film

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