TECHNICAL DATASHEET

EBECRYL® 8896

Aliphatic Urethane Acrylate

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EBECRYL® UV/EB Energy Curable Resins

INTRODUCTION

EBECRYL 8896 is a revolutionary aliphatic urethane acrylate designed for applications requiring haptic properties (e.g. "soft touch/feel"). Films of EBECRYL 8896 cured via exposure to ultraviolet light (UV) or electron beam (EB) are tough, flexible, and resistant to yellowing. EBECRYL 8896 is compatible with variety of fillers, pigments, waxes, and polymeric beads allowing formulator maximum formulating latitude to create a number of haptic properties ranging from a velvety/silky feel to EBECRYL 8896's intrinsic rubbery feel.

PERFORMANCE HIGHLIGHTS

UV/EB cured products based on EBECRYL 8896 are characterized by the following performance properties:

- Rubbery feel
- High flexibility
- Good abrasion resistance

The haptic properties of UV/EB cured formulations containing EBECRYL 8896 will depend on the selection of the other formulation components, such as co-resins, suitable additives, reactive diluents and photoinitiators.

SUGGESTED APPLICATION

Formulated UV/EB curable products containing EBECRYL 8896 may be applied by spray coating, screen, roller and curtain coating methods. EBECRYL 8896 is recommended for use in:

- Haptic coating on plastics and films
- Flexible coatings
- In-mold decoration

TYPICAL PHYSICAL PROPERTIES	VALUE
Appearance	waxy
Color, Gardner scale, 50°C	<1
Density, g/ml at 25°C	1.06
Functionality, theoretical	3
Resin solids (% by weight)	80
Butyl acetate (% by weight)	20
Viscosity, 25°C, cP/mPa·s	≅10000

TYPICAL CURED PROPERTIES(1)	
Tensile strength, psi (MPa)	479 (3.3)
Tensile elongation, %	50
Young's modulus, psi (MPa)	1450 (10)
Glass transition temperature, °C(2)	-26

PRECAUTIONS

Before using EBECRYL 8896, 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 8896.

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

(1) Measured on an 80 micron EB-cured film. Stress-strain testing was carried out at 23°C, 50% relative humidity, 50 mm/min. crosshead speed.

(2) Maximum of the tan(δ) peak measured by dynamical mechanical analysis (1 Hz, tensile mode).

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