

# EBECRYL® 8894

Aliphatic Urethane Acrylate

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## INTRODUCTION

EBECRYL 8894 is an aliphatic urethane acrylate, diluted in butyl acetate, designed for applications requiring high humidity and abrasion resistance. Films of EBECRYL 8894 cured via exposure to ultraviolet light (UV) or electron beam (EB) exhibit excellent exterior durability, good toughness and flexibility, as well as the non-yellowing properties typical of an aliphatic urethane.

## PERFORMANCE HIGHLIGHTS

UV/EB cured products based on EBECRYL 8894 are characterized by the following performance properties:

- Excellent humidity resistance
- Excellent toughness
- Good abrasion resistance
- Non-yellowing

The actual properties of UV/EB cured formulations containing EBECRYL 8894 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 8894 may be applied by spray coating, screen, roller and curtain coating methods. EBECRYL 8894 is recommended for use in coatings requiring:

- Excellent humidity resistance
- Exterior durability
- Flexibility
- In-mold decoration

## TYPICAL PHYSICAL PROPERTIES

	VALUE
Appearance	clear liquid
Color, Gardner scale	<1
Density, g/ml at 25°C	1.07
Functionality, theoretical	4
Resin solids (% by weight)	80
Butyl acetate (% by weight)	20
Viscosity, 25°C, cP/mPa·s	≅65000

## TYPICAL CURED PROPERTIES<sup>(1)</sup>

Tensile strength, psi (MPa)	4061 (28)
Tensile elongation, %	37
Young's modulus, psi (MPa)	61786 (426)
Glass transition temperature, °C <sup>(2)</sup>	60

## PRECAUTIONS

Before using EBECRYL 8894, 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 8894.

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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