



TECHNICAL DATA SHEET

EBECRYL[®] 280/15IB

Aliphatic Urethane Diacrylate

INTRODUCTION

EBECRYL 280/15IB is an aliphatic urethane diacrylate oligomer diluted 15% by weight with the reactive diluent isobornyl acrylate (IBOA)⁽¹⁾. Films of Ebecryl 280/15IB cured by ultraviolet light (UV) or electron beam (EB) exhibit toughness, flexibility, good adhesion to various substrates, as well as the non-yellowing properties typical of an aliphatic urethane acrylate.

PERFORMANCE HIGHLIGHTS

EBECRYL 280/15IB is characterized by:

- Low color
- High viscosity

UV/EB cured products based on EBECRYL 280/15IB can be expected to have the following properties:

- Good flexibility
- Toughness
- Non-yellowing, exterior durability

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 280/15IB may be applied by lithographic, screen, gravure, direct or reverse roll, and curtain coating methods.

EBECRYL 280/15IB is recommended for use in:

- Coatings for metal requiring flexibility and impact resistance
- Screen inks and coatings on various substrates
- Non-yellowing, exterior durable coatings

VISCOSITY REDUCTION

In addition to IBOA, EBECRYL 280/15IB can be reduced in common reactive diluents such as 2-phenoxyethyl acrylate (EBECRYL 114)⁽¹⁾, 1,6-hexanediol diacrylate (HDODA)⁽¹⁾, trimethylolpropane triacrylate (TMPTA)⁽¹⁾, and tripropylene glycol diacrylate (TRPGDA)⁽¹⁾. 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.

(1) Product of Cytec Industries Inc.

SPECIFICATIONS

	SMT ⁽¹⁾	VALUE
Color, Gardner scale, max.	001-R	2
Appearance	002-A	Clear liquid
Viscosity at 60°C, cP P	013-AAA	2000-3000

TYPICAL PHYSICAL PROPERTIES

Density, g/ml, 25°C	1.12
Functionality, theoretical	2
NCO, %	<0.2
Oligomer, % by weight	85
Reactive diluent, % by weight	15

STORAGE AND HANDLING

Before using EBECRYL 280/15IB, consult the **Material Safety Data Sheet** for additional information on hazards, handling procedures, and recommended protective equipment.

The maximum recommended storage temperature for EBECRYL 280/15IB is 4°C to 40°C (39°F to 104°F). 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.

PRECAUTIONS

Avoid contact with eyes, skin and clothing. Direct contact with this material may cause moderate eye and mild skin irritation. Inhalation may cause respiratory tract irritation. Repeated or prolonged dermal contact may cause allergic skin reactions. Wash thoroughly after handling. Use with adequate ventilation. Keep container closed.

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.

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