

EBECRYL[®] 8501

Low Energy Cure Resin for Automotive Refinish and Metal

INTRODUCTION

EBECRYL 8501 is an aliphatic urethane diacrylate designed for use in automotive refinish and general metal applications. Films of EBECRYL 8501 exhibit a unique blend of flexibility and toughness coupled with good corrosion resistance. EBECRYL 8501 contains isobornyl acrylate (IBOA)⁽¹⁾ as a reactive diluent.

PERFORMANCE HIGHLIGHTS

EBECRYL 8501 is characterized by:

- Excellent cure response under low light intensity conditions
- Good wetting of inert and reactive fillers
- 1K package configuration with 2K performance properties for automotive refinish putties
- Reduce sanding time compared to 2K automotive refinish putties
- Deep dent repair
- Easily sculptured to car body shape

Cured products containing EBECRYL 8501 are characterized by the following performance properties:

- Excellent adhesion to metal, metallic, and various automotive substrates
- Good flexibility and toughness
- Low shrinkage upon cure

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

SUGGESTED APPLICATIONS

EBECRYL 8501 is recommended for use in:

- Low energy cure
- Automotive end of line spot repair
- Automotive refinish
- General metal
- Metallized plastics
- Flexible filled coatings
- Thin film solar cell

USAGE

EBECRYL 8501 will typically constitute between 40 and 60% of the final UVA curable body putty.

SPECIFICATIONS

SMT ⁽²⁾	VALUE
Appearance	002-A
	Clear to hazy liquid

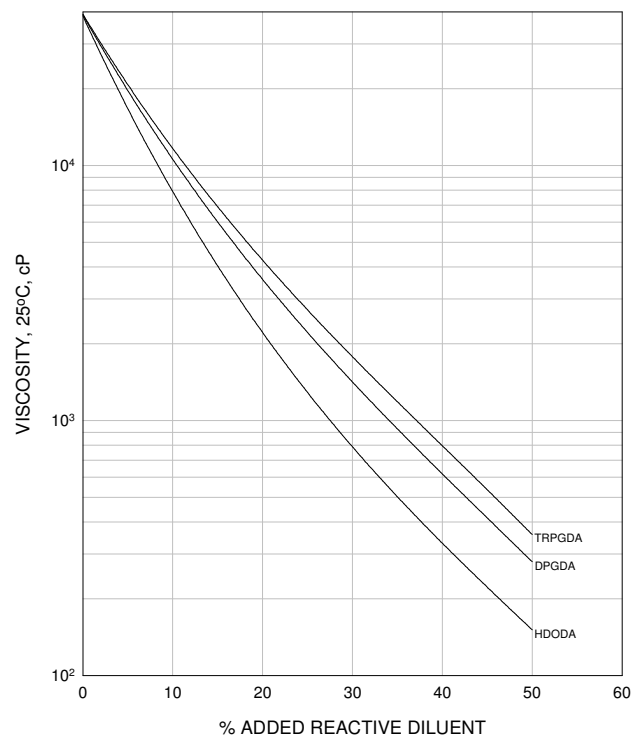
TYPICAL PHYSICAL PROPERTIES

Color, Gardner scale	<3
Density, g/ml at 25°C	1.10
Functionality, theoretical ⁽³⁾	3.0
Oligomer, % by weight	85
Viscosity at 25°C, cP	28000

TYPICAL CURED PROPERTIES ⁽⁴⁾

Tensile, psi	4200
Elongation at break, %	28
Modulus, psi	120000
Toughness, psi	1000

Graph I
EBECRYL 8501
Viscosity Reduction with Reactive Diluents



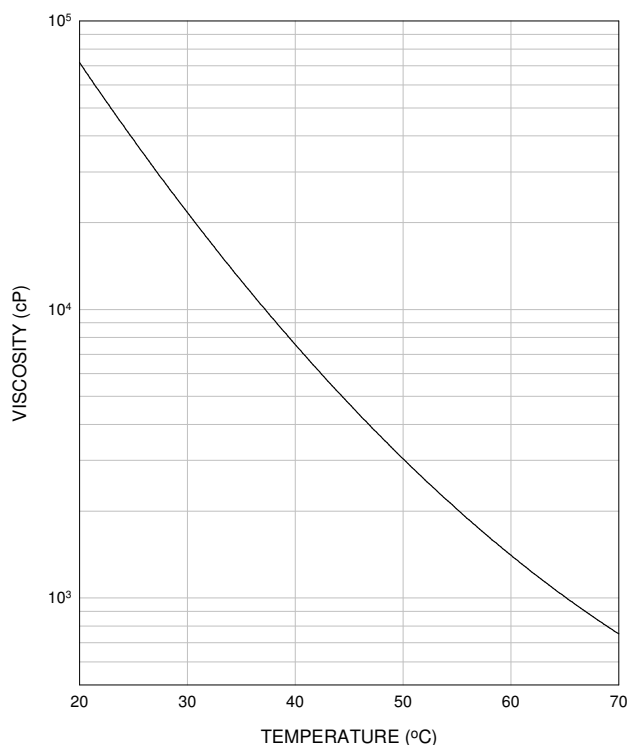
(1) Product of Cytec Industries Inc.
 (2) Standard Methods of Testing available upon request.
 (3) Theoretical determination based on the undiluted oligomer.
 (4) UV cured 125 μ thick films.

VISCOSITY REDUCTION

Graph I shows the viscosity reduction of EBECRYL 8501 with dipropylene glycol diacrylate (DPGDA)⁽¹⁾, 1,6-hexanediol diacrylate (HDODA)⁽¹⁾, and tripropylene glycol diacrylate (TRPGDA)⁽¹⁾. Although viscosity reductions can be achieved with non-reactive solvents, reactive diluents are preferred because they are essentially 100% converted during UV exposure to form an integral part of the coating, thus avoiding solvent emissions. The specific reactive diluent used will influence performance properties such as flexibility and adhesion.

Graph II illustrates the change in viscosity of EBECRYL 8501 with increasing temperature.

Graph II
EBECRYL 8501
Viscosity vs. Temperature



(1) Product of Cytec Industries Inc.

STORAGE AND HANDLING

Before using EBECRYL 8501, consult the **Material Safety Data Sheet** for additional information on hazards, handling procedures, and recommended protective equipment.

The maximum recommended storage temperature for EBECRYL 8501 is 40°C (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 skin 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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