# EBECRYL® 130

## Aliphatic Diacrylate

### INTRODUCTION

EBECRYL 130 is a cyclic aliphatic diacrylate useful as a reactive diluent in UV (ultra violet) or EB (electron beam) curable coatings and inks. EBECRYL 130 can impart a combination of hardness, toughness, and resiliency coupled with improved adhesion properties on various substrates. EBECRYL 130 can also significantly increase the Tg of cured polymers. EBECRYL 130 is particularly useful for scratch resistant coatings an plastics and as a pigment grinding vehicle for UV inkjet inks.

### PERFORMANCE HIGHLIGHTS

EBECRYL 130 is characterized by:

- Low odor
- Light color
- Low viscosity

UV/EB cured products based on EBECRYL 130 are characterized by the following performance properties:

- High Tg
- Low shrinkage
- Improved adhesion
- Reduced water permeability

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

### SUGGESTED APPLICATIONS

EBECRYL 130 can be used to disperse all process color pigments via bead mill for the production of inkjet inks.

Formulated UV/EB curable products containing EBECRYL 130 may be applied via lithographic, screen, gravure, inkjet, direct or reverse roll, and curtain coating methods. EBECRYL 130 is recommended for use in:

- Scratch and abrasion resistant coatings
- Coatings requiring increased thermal resistance
- Inkjet inks

### VISCOSITY REDUCTION

Graph I shows the viscosity reduction of several EBECRYL oligomers(1) when blended with an increasing weight percent of EBECRYL 130.

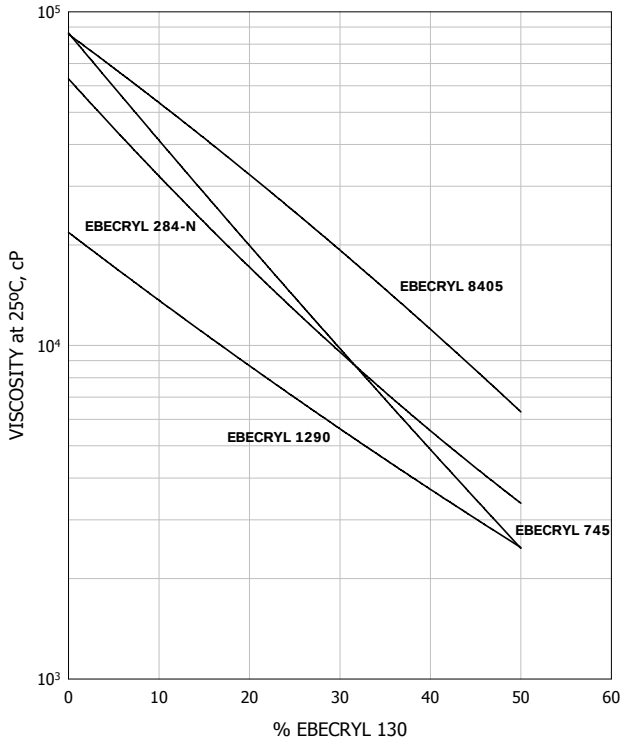
### TYPICAL PROPERTIES

| | |
|---|---|
| Appearance | Clear liquid |
| Color, Gardner scale | ≤5 |
| Density, g/ml at 25°C | 1.09 |
| Functionality, theoretical(2) | 2 |
| Solids, % by weight | 100 |
| Viscosity at 25°C, cP | 160 |

### TYPICAL CURED PROPERTIES(3)

| | |
|---|---|
| Tensile strength, psi | 5000 |
| Elongation at break, % | 2 |
| Young's modulus, psi | 300000 |

**Graph I**
**Diluency Effect of**
**EBECRYL 130 on Viscous Oligomers**




(1) Products of Cytec Industries Inc.
(2) Theoretical determination based on the undiluted oligomer.
(3) UV cured 5.0 mil thick film.

## STORAGE AND HANDLING

Before using EBECRYL 130, 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 130 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.

• Cytec Industries Inc. | 1950 Lake Park Drive, Smyrna GA 30080 | Phone 800-433-2873 | Fax 678-255-4746 •