

DIPENTAERYTHRITOL PENTA/HEXAACRYLATE

INTRODUCTION

EBECRYL® 895 is a multifunctional monomer which polymerizes when exposed to sources of free radicals. It is composed primarily of the pentaacrylate and hexaacrylate esters of dipentaerythritol. EBECRYL® 895 is particularly useful in UV (ultraviolet) and EB (electron beam) curable inks and coatings where improved cure response, hardness and scratch/abrasion resistance are required.

PERFORMANCE HIGHLIGHTS

EBECRYL® 895 is characterized by:

- High acrylate functionality
 - Lower viscosity compared with standard DPHA
- UV/EB cured products based on EBECRYL® 895 are characterized by the following performance properties:
- Fast cure response
 - High cross-link density
 - Improved scratch and abrasion resistance
 - Excellent hardness
 - Good chemical resistance
 - Increased adhesion

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

SUGGESTED APPLICATIONS

Formulated UV/EB curable products containing EBECRYL® 895 may be applied by lithographic, screen, gravure, direct or reverse roll, and curtain coating methods. EBECRYL® 895 is recommended for use in:

- UV/EB curable inks and coatings where fast cure response high cross-link density are desired

TYPICAL PHYSICAL PROPERTIES

Acid value	< 10
Appearance	Clear liquid
Color, Gardner	< 3
Density, g/cm ³	1.16
Functionality, theoretical	~5.5
Molecular weight, theoretical	520
Residual acrylic acid, ppm	< 200
Solvent content	< 10
Viscosity at 25°C, mPa.s	~7500

PRECAUTIONS

Before using EBECRYL® 895, 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

EBECRYL® 895 can become (partially) crystalline during storage at ambient temperature. Crystallization does not impact the quality of the product. Before use the material should be fully liquified by heating for 48 hours at 60°C. Recommended storage temperature: 4°C to 40°C.

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.