

ENERGY CURABLE RESIN FOR LAMINATING ADHESIVES

INTRODUCTION

EBECRYL® 824 is an acrylate functional resin designed for formulating UV/EB energy curable laminating adhesives. It is suited to both film/film and film/paper lamination. EBECRYL® 824 can provide cured laminating adhesives with low migration and residual odor.

PERFORMANCE HIGHLIGHTS

EBECRYL® 824 is characterized by:

- Low viscosity
- Mild odor
- Low color

UV/EB cured products based on EBECRYL® 824 are characterized by the following performance properties:

- Excellent adhesion to many common plastic films
- Good bond strength in laminates
- Low migration and residual odor

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

EBECRYL® 824 is recommended for use in:

- UV/EB curable adhesives for film/film and film/paper lamination.

STARTING POINT FORMULATION – UV CURE

Component	Hg ⁽¹⁾ - 250 mJ/cm ²	LED ⁽²⁾ - 510 mJ/cm ²
EBECRYL® 824	98	98
EBECRYL® P39 ⁽³⁾	2	
TPO-L ⁽⁴⁾		2
Total	100	100
Viscosity, 25°C, mPa.s	2020	1950
White BOPP ⁽⁵⁾ /Transparent BOPP ⁽⁶⁾	White BOPP destructed ⁽⁹⁾	White BOPP destructed ⁽⁹⁾
PET ⁽⁷⁾ /PE ⁽⁸⁾	PET destructed ⁽⁹⁾	PET destructed ⁽⁹⁾

⁽¹⁾ Heraeus Noblelight electrodeless, 1 x 600 watt/in lamp

⁽²⁾ Phoseon, 16 W 395 nm lamp

⁽³⁾ Product of allnex

⁽⁴⁾ Product of Lambson

⁽⁵⁾ Multiplastics HSF 5020 two-side heat sealable OPP

⁽⁶⁾ AQS transparent OPP biaxially oriented OPP

⁽⁷⁾ Flexpet™ F-CHC biaxially oriented polyester film

⁽⁸⁾ Imaflex laminating film LM-303

⁽⁹⁾ ASTM D1876 – Standard Test Method for Peel Resistance of Adhesives (T-Peel Test)

TYPICAL PROPERTIES

Appearance	Clear liquid
Color, Gardner	max. 1
Density, g/cm ³ , 25°C	1.12
Functionality, theoretical	~5
Viscosity at 25°C, mPa.s	1900 -2100

PRECAUTIONS

Before using EBECRYL® 824, 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® 824.