

URETHANE ACRYLATE RESIN

INTRODUCTION

EBECRYL® 5129/20 HD is a hexafunctional, aliphatic urethane acrylate oligomer diluted with 20% of 1,6-hexanediol diacrylate (HDDA) monomer. EBECRYL® 5129/20 HD provides fast cure response when exposed to ultraviolet light (UV) or electron beam (EB). Cured films of EBECRYL® 5129/20 HD exhibit high hardness, abrasion and solvent resistance combined with a good flexibility.

PERFORMANCE DATA

EBECRYL® 5129/20 HD is characterized by:

- Light colour
- Excellent cure response

UV/EB cured products based on EBECRYL® 5129/20 HD are characterized by the following performance properties:

- High hardness and scratch resistance
- Good solvent resistance
- High gloss
- Fast cure speed
- Non-yellowing properties
- Good flexibility

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® 5129/20 HD may be applied by lithographic, screen, gravure, direct or reverse roll, and curtain coating methods.

EBECRYL® 5129/20 HD is recommended for use in:

- Wood coatings and fillers
- Scratch resistant coatings on plastic
- Improving cure speed, solvent resistance and gloss

TYPICAL VALUE

Appearance	clear liquid
Höppler viscosity at 25°C, mPa.s	± 1850
Colour, Gardner	max. 1

PHYSICAL PROPERTIES

Density, g/cm ³	1.15
Molecular weight, theoretical	800
Functionality, theoretical	6
Polymer solids, % by weight	80
HDDA, % by weight	20

VISCOSITY REDUCTION

EBECRYL® 5129/20 HD can be diluted with reactive monomers such as 1,6-hexanediol diacrylate (HDDA)⁽¹⁾ and trimethylolpropane triacrylate (TMPTA)⁽¹⁾. The specific reactive diluent(s) used will influence performance properties such as hardness and flexibility.

⁽¹⁾ product of allnex

STORAGE AND HANDLING

Care should be taken not to expose radiation curable products to temperatures exceeding 40°C for prolonged periods or to direct sunlight. This might cause uncontrollable polymerization of the product with generation of heat.

Storage and handling should be in stainless steel, amber glass, amber polyethylene or baked phenolic lined containers. Do not store this material under an oxygen free atmosphere. Use dry air to displace material removed from the container. This material should not be stored for more than 2 years after production date.

PRECAUTION

The following is a summary of the precautions to be taken when handling this product. Please refer to the Material safety Data Sheet for further details.

The toxicological properties of this material have not been fully determined. Products of this type can be expected to be eye and skin irritants and have the potential to cause sensitization or other allergic responses. Appropriate precautions should be taken to avoid eye and skin contact and to avoid inhalation of the aerosols or vapours. Consult the relevant Material Safety Data Sheet for appropriate handling procedures and protective equipment prior to using this or any other material referred to in this bulletin.

See Material Safety Data Sheet for emergency and first aid procedures.

STATUTORY LABELING

Please refer to the Safety Data Sheet