

ACRYLATED AMINE

INTRODUCTION

EBECRYL® 7201 is an acrylated amine primarily used as a hydrogen donor, or photoactivator, in ultraviolet light (UV) curable coatings and inks. When used in formulations in combination with a photosensitizer (e.g. benzophenone), EBECRYL® 7201 provides rapid UV cure response in air by mitigating the effects of oxygen inhibition at the coating or ink surface. Unlike conventional tertiary amines such as N-methyldiethanolamine, EBECRYL® 7201 reacts to become part of the UV cured polymer, resulting in lower residual odor and improved moisture resistance.

PERFORMANCE HIGHLIGHTS

EBECRYL® 7201 is characterized by:

- Moderate viscosity
- Improved stability vs. conventional tertiary amines

UV/EB cured products based on EBECRYL® 7201 are characterized by the following performance properties:

- Excellent UV cure response
- Reduced odor
- Improved moisture resistance
- No surface migration of amine
- High gloss

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

SUGGESTED APPLICATIONS

Formulated UV/EB curable products containing EBECRYL® 7201 may be applied via direct or reverse roll, offset gravure, metering rod, slot die, knife over roll, air knife, curtain and immersion and spin coating methods, as well as screen printing. EBECRYL® 7201 is recommended for:

- Flexographic and screen inks
- Overprint varnishes
- Coatings for paper and plastics
- Wood topcoats

TYPICAL PHYSICAL PROPERTIES

| | |
|-----------------------------|--------------|
| Appearance | Clear liquid |
| Color, Gardner scale | ≤2 |
| Density, g/ml at 25°C | 1.15 |
| Weight/amine, theoretical | 397 |
| Viscosity at 25°C, mPa·s/cP | ~1150 |

TYPICAL CURED PROPERTIES

| | |
|--|-------------|
| Tensile strength, psi (MPa) ⁽¹⁾ | 138 (0.95) |
| Elongation at break, % ⁽¹⁾ | 9.4 |
| Young's modulus, psi (MPa) ⁽¹⁾ | 1559 (10.7) |

(1) UV cured 125 µ thick films

PRECAUTIONS

Before using EBECRYL® 7201, 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® 7201.