

ACRYLATED AMINE

INTRODUCTION

EBECRYL® P104 is an acrylated amine 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® P104 provides rapid UV cure response in air by mitigating the effects of oxygen inhibition at the coating or ink surface. Recommended levels are from 5 to 15% based on total formulation, usually combined with 3 - 5% photosensitizer. EBECRYL® P104 can be used with EBECRYL® P39⁽¹⁾ (a polymeric benzophenone derivative) for formulations requiring low residual odor.

⁽¹⁾ Product of allnex.

PERFORMANCE HIGHLIGHTS

EBECRYL® P104 is characterized by:

- Very low viscosity
- Light color
- Improved stability vs. conventional tertiary amines
- Low volatility

UV/EB cured products based on EBECRYL® P104 are characterized by the following performance properties:

- Excellent UV cure response
- Reduced odor
- No surface migration of amine
- No reaction of amine with organic pigments
- High gloss

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

SUGGESTED APPLICATIONS

Formulated UV curable products containing EBECRYL® P104 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 lexographic and screen printing. EBECRYL® P104 is recommended as a reactive co-initiator in the following applications:

- Overprint varnishes
- Screen and flexo inks
- Wood topcoats
- Clear coatings on paper and plastics
- Pigmented coatings

SPECIFICATIONS

Appearance	Clear liquid
Color, Gardner	max. 3
Viscosity, 25°C, mPa.s	7 - 13

TYPICAL PHYSICAL PROPERTIES

Density, g/cm ³ at 25°C	1.01
Weight/amine, theoretical	298

PRECAUTIONS

Before using EBECRYL® P104, 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® P104.