TECHNICAL DATASHEET

EBECRYL® 168

Acidic Methacrylate

March 2017

EBECRYL® UV/EB Energy Curable Resins

INTRODUCTION

EBECRYL 168 is an acidic methacrylate adhesion promoter designed as an additive for ultraviolet (UV) and electron beam (EB) curable coatings on metal.

PERFORMANCE HIGHLIGHTS

EBECRYL 168 is characterized by:

- Light color
- Low viscosity
- Acid functionality

UV/EB curable formulated products containing EBECRYL 168 are characterized by:

- Good adhesion to metal substrates
- Improved compatibility (relative to EBECRYL 170)

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

SUGGESTED APPLICATIONS

Formulated UV/EB curable products containing EBECRYL 168 may be applied via direct or reverse roll, offset gravure, metering rod, slot die, knife over roll, air knife, curtain and immersion coating methods. EBECRYL 168 is recommended for use in:

- General metal coatings and primers
- Coatings for galvanized pipe and tube
- Coil coatings
- Solder resist formulations

SPECIFICATIONS	VALUE
Acid value, mg KOH/g	250-330
Appearance	Clear liquid
Color, Gardner, max.	1.5
Viscosity, 25°C, cone/plate, cP/mPa·s	900-1900
Viscosity, 25°C, Höppler, cP/mPa·s	850-1850

TYPICAL PHYSICAL PROPERTIES

Density, g/ml at 25°C	1.29
Functionality, theoretical[(1)]	~1.5
Oligomer, % by weight	100

NOTES ON USAGE

Typical usage level is between 1% and 5% by weight of the total formulation. Due to its acidic character, EBECRYL 168 can undergo hydrolysis, and therefore formulations containing EBECRYL 168 should be protected from humidity. Since EBECRYL 168 can react with alkaline materials, free amines, amino acrylates, basic pigments and N-vinyl-2-pyrrolidone should not be used in combination with EBECRYL 168.

Formulations may exhibit turbidity with the addition of EBECRYL 168, though such turbidity may not be immediately apparent. The presence of turbidity is not normally indicative of coating performance problems, though in severe instances, separation or precipitation may occur.

PRECAUTIONS

Before using EBECRYL 168, 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.

Contamination of EBECRYL 168 with acetone or other ketones can cause coloration of the product during storage.

See the SDS for the recommended storage temperature range for EBECRYL 168.

Please refer to the allnex Guide to Safety and Handling of Acrylate Oligomers and Monomers for additional information on the safe handling of acrylates.

(1) Theoretical determination based on the undiluted oligomer.

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