TECHNICAL DATASHEET

EBECRYL® 350

Silicone Diacrylate

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EBECRYL® UV/EB Energy Curable Resins

allnex
The Coating Resins Company

INTRODUCTION

EBECRYL 350 is a silicone diacrylate that improves slip, substrate wetting, and coating flow and leveling when used as an additive in formulations cured by ultraviolet light (UV) or electron beam (EB). Cured films containing EBECRYL 350 will exhibit a smooth, tack free surface, with good blocking resistance. Because of its acrylate functionality, the silicone cures into the polymeric backbone, thus eliminating the migration that free silicones often display in coatings.

PERFORMANCE HIGHLIGHTS

EBECRYL 350 is characterized by:

- Low surface tension
- Low viscosity
- Good compatibility with other acrylates
- Non-migratory

UV/EB cured products based on EBECRYL 350 are characterized by the following performance properties:

- Low COF, increased slip
- Resistance to blocking
- High gloss
- Good mar resistance

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 350 may be applied via direct or reverse roll, offset gravure, metering rod, slot die, knife over roll, air knife, immersion and spin coating methods as well as screen printing. EBECRYL 350 is recommended for use in:

- Overprint varnishes
- Clear coatings on paper, plastics and metal
- Release coatings

Usage levels between 0.5% and 2.0% by weight of the total formulation are generally sufficient to provide satisfactory slip.

SPECIFICATIONS	VALUE
Acid value, mg KOH/g, max.	7
Appearance	Cloudy liquid
Color, Gardner scale, max	10
Viscosity, 25°C, cP/mPa·s	200-500

TYPICAL PHYSICAL PROPERTIES

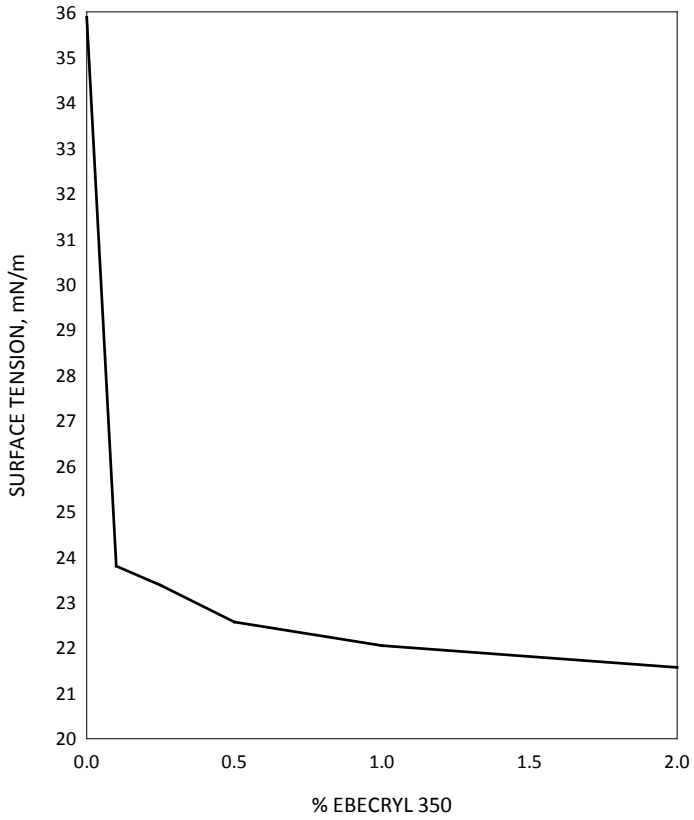
Density, g/ml at 25°C	1.05
Functionality, theoretical(1)	2
Oligomer, % by weight	100
Surface tension, mN/m(2)	21.6

SURFACE TENSION

The following graph illustrates the change in surface tension that occurs when increasing amounts of EBECRYL 350 are added to TMPTA(3).

EBECRYL 350

EFFECT ON THE SURFACE TENSION OF TMPTA



(1) Theoretical determination based on the undiluted oligomer.
(2) mN/m = dynes/cm
(3) Product of allnex

PRECAUTIONS

Before using EBECRYL 350, 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 350.

EBECRYL 350 may exhibit crystallization if subjected to temperatures below 15°C. This crystallization can be removed by heating containers of EBECRYL 350 to a uniform temperature of 40°C. Ovens or hotboxes are recommended methods of heating. Heating bands or blankets should not be used.

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

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