

ACRYLATED POLYURETHANE DISPERSION FOR WB UV INKJET

INTRODUCTION

UCECOAT® 2803 is an acrylated polyurethane dispersion in water designed for waterborne UV/EB curable inkjet inks. UCECOAT® 2803 is anionically stabilized in water without any external emulsifier. It is not stable under acidic conditions. UCECOAT® 2803 contains no co-solvent and exhibits favorable ink jetting properties associated with its water resolubility before cure. UCECOAT® 2803 provides hard cured coating along with good stain and chemical resistance.

PERFORMANCE HIGHLIGHTS

UCECOAT® 2803 is characterized by:

- Label-free translucent to bluish white dispersion
- Excellent colloidal stability
- Tin-free composition
- Very low viscosity adjustable by adding water in any proportion
- Re-dispersibility after water evaporation and before UV curing
- Slightly tack after water evaporation and before UV curing
- Easy formulation and very good compatibility
- Good wetting of surfaces

UV/EB cured products based on UCECOAT® 2803 are characterized by the following performance properties:

- Very good UV reactivity
- Very good adhesion on different substrates (paper & board, plastics)
- High hardness and mechanical resistance
- Good flexibility
- Good transparency & gloss

The actual properties of UV/EB cured products also depend on the selection of other formulation components such as photo-initiators, co-solvents, pigments, and other additives.

SUGGESTED APPLICATIONS

Formulated UV/EB curable products containing UCECOAT® 2803 are recommended for use in WB UV inkjet application in all colors. It can also be used as an overprint varnish binder.

PHYSICAL VALUES

| | |
|-------------------------------------|-------------|
| pH | 6.5 - 8.5 |
| Solid content, % by weight | 38.5 - 41.5 |
| LVT Viscosity at 25°C/50 rpm, mPa.s | < 500 |
| Particle size, nm | < 150 |

STORAGE AND HANDLING

Before using UCECOAT® 2803, please consult the Safety Data Sheet for additional information on hazards, handling procedures and recommended protective equipment.

The recommended storage temperature range for UCECOAT® 2803 is $\geq 0^{\circ}\text{C}$ (39°F) to $\leq 0^{\circ}\text{C}$ (104°F). Protect the product from freezing. Care should be taken not to expose the product to high temperature conditions or direct sunlight. Containers should be kept closed and away from materials that react with water. Bacteriological contamination can occur if the product is stored for an extended period in a container which is not sufficiently sealed or clean. Storage and handling should be in amber glass, amber polyethylene or baked phenolic lined containers. Do not store this material under an oxygen free atmosphere. Wash thoroughly after handling. This material should not be stored for more than 1 year.

PRECAUTIONS

Although this product was filtered before shipment, it is advisable to perform additional efficient filtrations before and/or after ink formulation and before using inside inkjet heads.

Avoid contact with eyes, skin and clothing. Direct contact with this material may cause minimal eye and skin irritation. Repeated or prolonged dermal contact may cause allergic skin reactions.