

ACTEGA Kelstar Technical Bulletin

Foil Stampable UV Coatings

Foil stamping a UV cured coating has many requirements that must be met to ensure successful, repeatable results. The requirements include: press preparation, selecting the correct UV coating and foil, and foil stamp equipment settings.

Press Preparation: It is imperative that all equipment that contacts the UV coating must be properly cleaned prior to running the UV coating – even a slight cross-contamination with a “regular” UV coating will severely degrade the foil receptivity properties of the foil stampable UV coating. The cleaning steps should include, at a minimum: washing the entire coater system (any hoses, coater pans, rollers, blankets, coater chambers, etc.) with a surfactant-free wash. After the wash has been thoroughly drained from the coater system, a small amount of the foil stampable UV coating should be “primed” through the system, and, subsequently, drained out as well.

To ensure complete and successful cleaning of the coater system, the surfactant-free wash step should be repeated once, before “priming” the coater system with the UV coating.

UV Coating Selection: Your local ACTEGA Kelstar representative will help select the correct foil receptive UV coating for your needs. Within the ACTEGA Kelstar line of foil stampable UV coatings are coatings that will exhibit very high gloss, very fast cure, excellent flexibility, and various ranges of slip and wetting.

Ink selection is a very important consideration. As recommended for all UV coated jobs, the inks should be wax-free and surfactant-free. This will ensure the UV coating will flow out and adhere properly to the inks.

Properties of UV Foil Stampable Coatings:

Generally, for a UV coating to be able to accept a foil stamp, the surfactants in that coating are either completely eliminated, or, are greatly reduced. The elimination of surfactants creates a surface that will accept a foil stamp (i.e., a high dyne level).

The elimination of surfactants from the UV coating negatively affects the slip and wetting ability of the coating – *generally*, foil stampable UV coatings have very little, if any slip, and, cannot wet out or flow well over “lower” dyne level inks and primers (thus, the need for wax-free and surfactant-free inks and primers). Also, by having very little slip, the rub resistance of the UV coating is also diminished.

Foil Selection: Due to the wide variety of foils available, your foil supplier should be able to supply the appropriate foil to be used on the UV coating. Many times, the specific foil that your supplier may choose will be different than the “everyday” foil, due to the differences in adhesives required to work with a UV coating.

Foil Application Considerations: The foil stamp process is about as much of an “art” as it is a “science”. As such, there may likely be alterations required in the heat, pressure, and/or dwell time of the stamping machine to achieve proper adhesion of the foil to the UV coating.

Contact ACTEGA Kelstar at 856 829 6300 or info.actega.kelstar@altana.com for additional information or technical assistance.