ACTEGA Kelstar Technical Bulletin
High Build UV Curable Coatings

High Viscosity Silk Screen UV Curable coatings, such as Ultra Sheen UV-9421 and Ultra Sheen UV-XT9739 are designed to give a High Build, Raised Image (Embossed type) appearance when applied properly on screen presses. These coatings are formulated for use on paper, board, or even uncoated substrates. ACTEGA Kelstar suggests sealing the uncoated surface with an aqueous primer for improved hold-out, but it is not always necessary. Do not score or fold over the raised UV area, as it will usually crack due to the high coating weight.

The most important part of the whole process is the preparation of the screen and squeegee selection. Listed below are recommended steps to take in preparation:

• A comparatively "soft" squeegee, with a durometer of between 55 and 70 should be selected.

• Screen meshes that should be used are typically 110, 140, or 180 meshes.

• Apply one coat of emulsion on the inside (top side where the UV coating will be) of the screen, and let dry.

If using a two-sided emulsion trough, ACTEGA Kelstar recommends applying the emulsion with the broader/wider radius side of the trough to create a thicker coat.

• After the first coat of emulsion is dried, apply one coat of emulsion on the outside/bottom, and one coat of emulsion to the inside of the screen, and let dry.

• Repeat the emulsion application to the outside/bottom of the screen until six to eight coats of emulsion on the bottom of the screen.

Applying the emulsion in this manner will build up the screen mesh to hold and transfer more UV coating, therefore giving the embossed appearance. Screen exposure time needs to be increased due to the emulsion thickness. Additionally, post exposure after washing out the image area increases the durability for longer runs.

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