

Glass Technical Document

Proper Placement of Silkscreen Pattern and Why:

If you can imagine it, you can create it via silkscreen. Silkscreened decorative glass products continue to grow in popularity. The reasons for this continued growth are many fold. However the features most frequently mentioned are its decorative appeal as well as its functionality. Silkscreened glass improves solar control performance; reduces reflection and glare and decreases solar transmission. Silkscreened glass offers the designer unlimited creative options.

To create a silkscreened decorative glass product, the glass is automatically indexed onto a horizontal table. A silkscreen pattern is lowered onto the glass and a squeegee automatically traverses across the glass applying ceramic frit to the glass surface. The glass is then conveyed thru a drying oven to stabilize the ceramic frit. Finally the glass is heat-treated to permanently fuse the ceramic frit pattern to its surface.

A silkscreen pattern can be applied to any glass surface with the exception of a soft coat Low-E type product. The working metal in all soft coat Low-E coatings is that of silver and/or a fragile metal. The soft Low-E coating would become damaged as a result of the silkscreen process.

However, most soft coat Low-E coatings are of the high transmission type. With that in mind the decorative effect is not sacrificed if the silkscreen pattern is applied to the number three surface and/or the inboard clear lite of an insulating unit.



There are many advantages to the application of the silkscreen pattern to the clear inboard lite of an IGU on the number three surface.

- 1.) The decorative effect is not compromised from the project exterior or interior.
- 2.) It serves to reduce reflection and glare room side.
- 3.) The initial cost is less in comparison to glass that needs to be silkscreened and then coated with a Low-E coating and/or a second surface application.
- 4.) Should a replacement unit be required in the future, it would prove much less expensive and more readily available in comparison to a second surface silkscreen application.
- 5.) The functionality of the third surface silkscreen pattern is similar to that of a second surface application.

In summary, to silk-screen on top of a soft coated Low-E coated glass is not possible. The fragile Low-E coating would become damaged as a result of the silkscreen process. The proper method to achieve this task would be to place the silkscreened decorative pattern on the clear inboard lite and/or the number three surface.

Sincerely,
TriStar Glass Products

Gregory A. Oehlers
Director Architectural Sales

