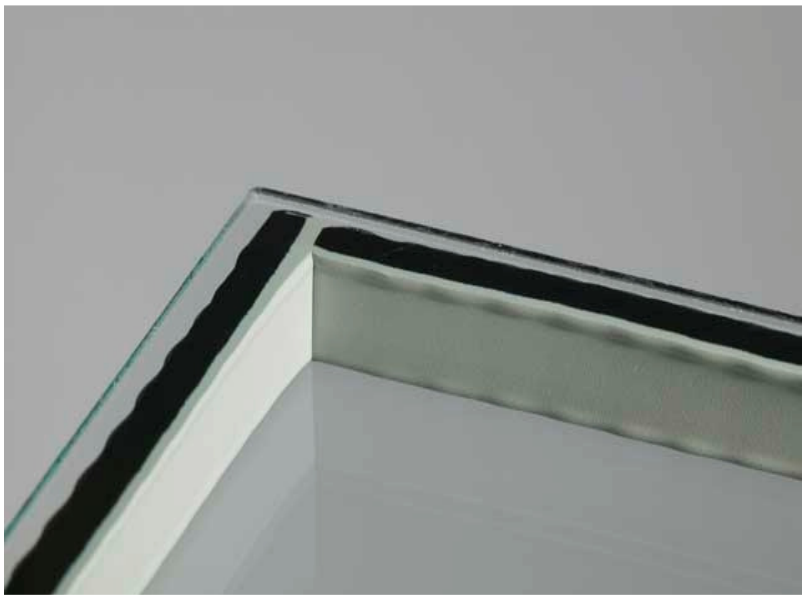
TOPIC: Closing and Sealing 4th Corners on Truseal Flexible Spacer IG Units	**DATE:** 06-08-11 (replaces 05-10-10)

The corner sealing procedure referenced below requires the sealant at the corner area to be warm. A temperature of 115°F ± 10°F (46°C ± 6°C) is recommended. Units that are allowed to cool must have the corner area re-heated before the corner is sealed.

When closing the 4th corner of a Truseal Duralite or Duraseal Flexible Spacer, it is critical that deliberate efforts be made to assure that the top layers of the spacer be pressed together to properly wet and create the seal that keeps the unit completely closed and dry during its service life. In the photo below, it is the complete, full-width joining of the two top coat layers that makes this seal effective.



Position the Teflon sealing stick in line with the starting leg of the applied "Dura" spacer and in the same plane as the glass surfaces. The Teflon stick must be positioned so that it overlaps the line of the top layer of the starting applied length of Duraseal by approximately 1/8"/3mm (see Figure 1). The stick should make contact with the back surface of the Duraseal over the full width of the airspace (see Figure 2).

Figure 1

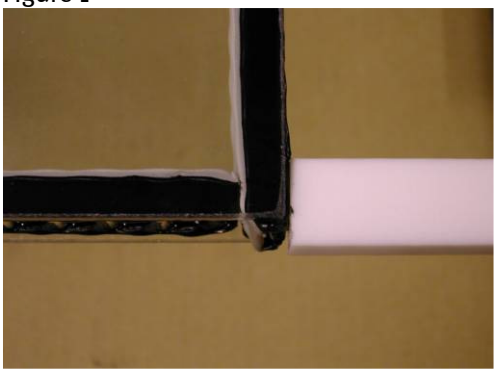
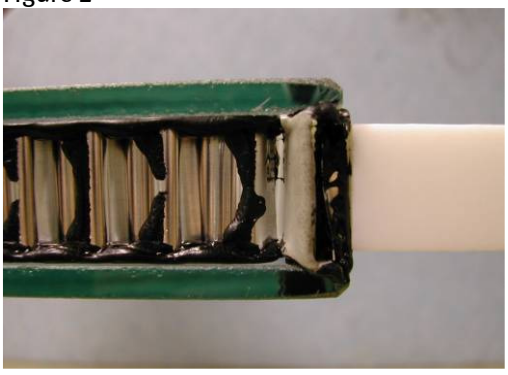


Figure 2



If the Teflon stick does not make contact with the full width of the back surface the joint must be sealed in two stages, applying the stick first to the top of the back surface and then to the bottom (see Figures 3 and 4).

Figure 3

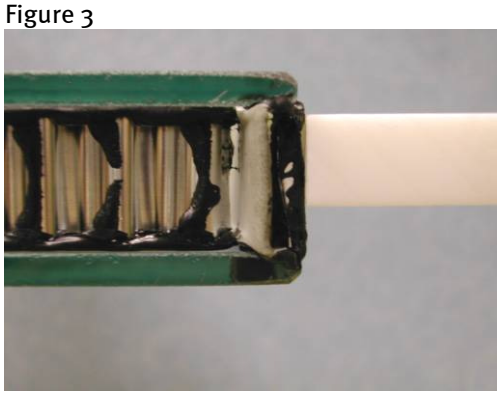
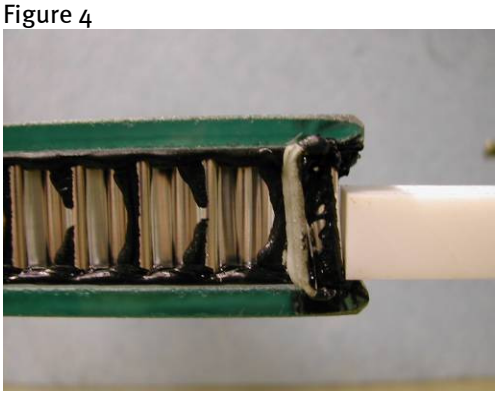


Figure 4



Push the stick in the direction of the starting length of Duraseal/Duralite to bring the final length into contact with the end of the starting length. Apply enough force to flatten the corrugated shim material and fully wet the topcoats; approximately 3/16" to ¼" (5-6 mm) deformation is usually sufficient (see Figures 5 and 6).

Figure 5

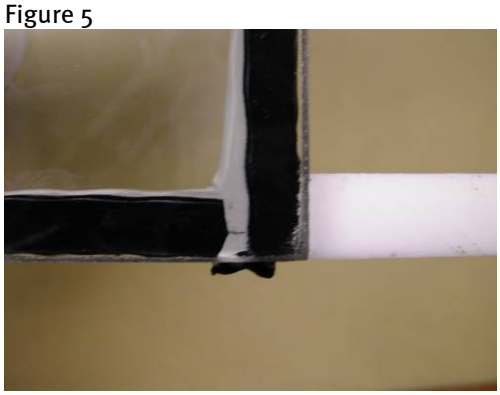
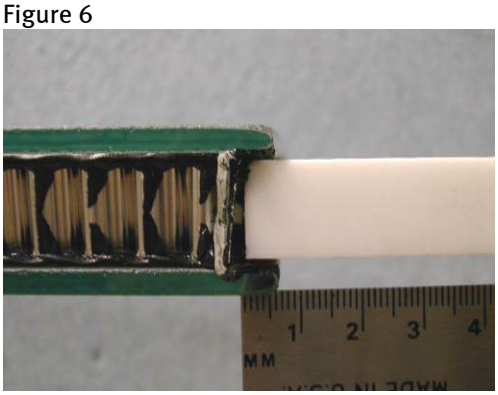


Figure 6



It is critical that the top layers of the starting and final lengths of the Duraseal are bonded together across the complete airspace width to create an airtight seal (see Figure 7). It is possible to partially or incompletely shear the spacer so that the top layers do not meet across the complete airspace width (see Figure 8). Avoid this by using a careful closing technique, and getting the necessary visual feedback to verify that the topcoat layers are mended and fully adhered.

Figure 7

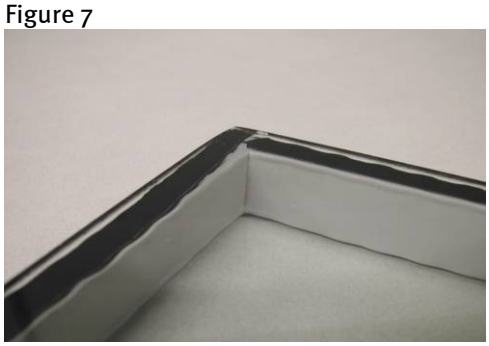


Figure 8

3-Point* Inspection Procedure for Final Corner

In addition to the above procedures, the following outlines an *inspection procedure* that is recommended for use to ensure proper sealing of the final corner.

1. Ensure person inspecting final corner has good eyesight and a generally well-lit work area.
2. Provide good spot illumination in the form of a 100W "trouble lamp" or bright flashlight and a small 50mm (2") diameter mirror.
3. Inspect the two bond lines on the inner glass surfaces and the top coat joint at the final corner.
4. The mirror is used to make it easier to view the top coat joint and the bond line surface on the opposite side of the IGU, given that 4th corners are usually oriented upward.
5. There must be no visible breaches or air voids that are continuous across the bond lines.
6. The top coat must be sealed together with no visible gaps.

1. ***3-Point inspection*** refers to the 2 bond lines to glass & the connecting top coat joint