

Glass Technical Document

Capillary Tubes

OPEN CAPILLARY TUBES HAVE BEEN INSTALLED IN THIS SHIPMENT TO EQUALIZE PRESSURE DIFFERENTIALS AND MUST BE SEALED PRIOR TO FINAL INSTALLATION

Introduction:

The use of capillary tubes in insulating glass units (IGU's) has long been established as a means to accommodate for changes in elevation of an IGU from the point of the IGU manufacture to the point of installation. Such elevation change creates a pressure differential between the IGU glazing space and the exterior environment that, unless alleviated, can cause glass deflection, excessive edge sealant stress and/or glass breakage. Capillary tubes act as a mechanism for relieving this pressure differential over a short period of time. Capillary tubes are closed at the point of installation as open capillary tubes may reduce the longevity of the unit and will void Tristar Glass, Inc.'s warranty.

The following conditions require a capillary tube:

- Any change in elevation from point of manufacture to final installation greater than +/- 2000ft.
- Any unit, during shipping, that will surpass a +/-4000ft elevation change.

Closing Procedure for Capillary Tubes:

Tubes must never be removed or crimped. Capillary tubes should be closed and sealed using the following procedure:

1. Snip the end of the tube with wire cutters (within ½" from the end see figure 1)
2. Apply a dab of silicone sealant to the end of the capillary tube after it has been cut (see figure 2)



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Figure 1: Cutting Tube 1/2" From End



Figure 2: Apply silicone dab to tube end

Important Notes:

- At the Jobsite, units shall be placed in the vertical position to allow pressure equalization for a minimum of 48 hours (or until the unit is flat) before sealing capillary tube
- Seal Capillary tube at moderate temperatures (50-70 degrees F). Sealing tubes during extreme low or high temperatures, or over a wide range of temperatures, may result in IGUs having varying degrees of flatness
- IGUs must be installed with capillary tube in upper corner with tube pointing down. Never install with capillary tube at bottom of window opening
- Shop Glazed units shipping over an elevation change greater than 2000ft must not have capillary tubes sealed until reaching final installation destination
- It is not recommended that capillary tubes be used with gas filled IGUs as any gas content will escape through the capillary tube reducing the percent concentration
- Prior to sealing, units manufactured with capillary tubes should be stored to protect them from the elements. Care should be taken to prevent any moisture exposure to the tubes end and physical damage to the tube



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