

About this Helpful Hint

The purpose of this “Helpful Hint” is to provide Gaska Tape customers with a guide to using VK Series foams as spacer tape in structural silicone curtain wall applications.

Considerations

Spacer Tape vs. Mounting Tape:

Gaska Tape VK Series foam is designed to be a spacer tape, not a “mounting tape” or fastener. As a spacer tape, the primary function is to resist compression from the weight of the assembly so that the proper amount of silicone structural sealant (which provides the long-term fastening function) is applied. Although VK foam tapes are not “mounting tapes”, a secondary function of these products can be as an assembly aid to help hold glass panes in position during the silicone curing.

Structural Silicone Selection:

There are many manufacturers of structural silicones and each has multiple grades of structural silicone. The cure time of these different grades of silicone can vary from as little as a few hours to as much as three weeks. Care must be used to select the proper silicone to assure that the silicone will be sufficiently cured to bear the full weight of the glass before it is positioned vertically. When the silicone has had sufficient time to cure, all of the load will be held by the silicone.

Shop vs. Field Glazing:

In shops or factories where windows are manufactured, the windows are typically assembled in a horizontal position. The window may then be moved to a storage area while the silicone continues to cure. The windows should be stored horizontally until the silicone has had sufficient time to cure before the windows are stored vertically. VK foams have an aggressive solvent based acrylic adhesive on both sides that will help to hold the glass in place, but this adhesive alone is not sufficient to hold heavy glass panes indefinitely in a vertical or nearly upright position. It is the window assembler’s responsibility to determine how much foam tape is needed, or if additional assembly aids such as setting blocks or mechanical fasteners are required, based on the weight of the assembly, the factory conditions and cure time of the silicone while taking into consideration their design and manufacturing plan.

When field glazing, safety is of primary concern. Vertical assemblies will need setting blocks and mechanical fasteners (i.e. "clips") to aid with load bearing until the silicone has had enough time to cure.

Environmental Conditions:

The temperature and humidity of the environment where the spacer tape is being used will affect the holding power of the adhesive as well as the curing time of the silicone. The humidity level can have a large effect on the cure time of some structural silicones.

On very cold days, the spacer tape adhesive will require extra time and pressure to achieve good wet out of the substrates. This can be aided by storing the foam tape at room temperature until just before it will be used. It is important to note that many silicones will take longer to cure in cold conditions.

On very hot days, the spacer tape adhesive ability to aid in holding weight will likely be less than normal. The assembly design and process should again take this into consideration.