Edgetech Introduces TriSeal™:
Stellar Super Spacer® Performance for Structural Glazing

TrueWARM® spacers

TriSeal Brings TrueWARM Spacer Technology to Structural Glazing

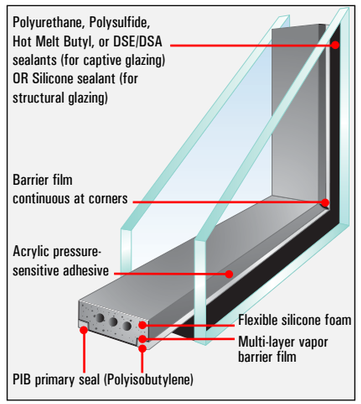
Much of North America's contemporary architecture relies on structural glazing. Using large panels of glass to create light-filled spaces in commercial and industrial buildings has been a popular practice for decades. At its most complex level, structural glazing involves creating entire buildings from glass. At its simplest level, structural glazing might merely involve fitting a revolving door or retail storefront. No matter what guise structural glazing comes in, modern architecture would be inconceivable without it.

The supporting steel framework in structurally glazed buildings can be internal or external; and as subtle (or dominant) as the architects' desire. Supporting structure is typically an aluminum sub-frame (curtainwall) that is then anchored to a building's primary structural frame. Glass used must be robust enough to withstand extremes of weather and is sometimes treated to reduce solar heat gain, UV, and sometimes, color daylight transmission.

Being inorganic and UV resistant, silicone is the preferred sealant approved for structural glazing applications. Serving as the primary curtainwall attachment, silicone offers architects virtually unlimited freedom to create dramatic building facades in glass, metal, stone, ceramic and composite panels.

Conventional aluminum spacer, still used in a majority of commercial projects, compromises thermal performance at a time when building energy codes are demanding more stringent U-values. Architects are considering Warm Edge alternatives.

Edgetech's new Super Spacer® TriSeal™ spacer with TrueWARM® NO-Metal technology easily outperforms aluminum spacer in thermal performance, condensation resistance and glass surface temperature. Like aluminum spacer, it works effectively with both structural and captive (fixed window) glazing applications. And, like aluminum spacer, it is compatible with silicone structural sealant, as well as with other secondary sealants for captive glass including polyurethane, polysulfide, DSE/DSA's or hot melt butyls.



Says Randy Braun, Edgetech's Director of Product Development, "We believe Super Spacer TriSeal will soon be 'the spacer of choice' in the emerging era of Green Architecture for commercial buildings."

How does TriSeal compare with other Super Spacer products? TriSeal consists of the same desiccated silicone foam material, acrylic adhesive to hold the spacer in place on the glass and a multi-layer vapor barrier. As with all Super Spacer silicone foam spacers, TriSeal provides excellent UV resistance, extreme temperature performance, fast dew-point drop, superior compression-set resistance, excellent color stability and enhanced sound dampening.

Its unique triple-seal design incorporates an inner acrylic adhesive seal for immediate unit handling, captive polyisobutylene primary seal for enhanced gas retention and low-moisture vapor transmission, plus an outer structural seal for proven structural glazing performance.

Architects will appreciate TriSeal's smooth matte black surface appearance, with no surface blistering or bubbling (other colors are available on special order). Unlike some competitive Warm Edge spacers, TriSeal easily applies and stays in a straight line and forms sharp 90-degree corners.

Suits architects' needs to a "T".

"The only physical difference in TriSeal is that we've added a 'T' section to the back of the spacer to support the pre-applied Polyisobutylene (PIB) sealant, which blocks moisture from invading the I.G. unit. TriSeal helps address architects' needs for dependable field-glazed structural panels and reliable factory-built fixed units in commercial projects", notes Braun.

Super Spacer TriSeal features a continuous moisture vapor barrier backing across the profiled back of the spacer, and is engineered to accept all sealants: Polyurethane, Polysulfide, Hot Melt Butyl, or DSE/DSA's (for captive glazing… or Silicone Sealant (for structural glazing).

TriSeal has been tested to Class CBA for sealed insulating glass durability performance.

Test conducted to ASTM E773/E774 specifications concluded that TriSeal:

- Exceeded CBA minimum frost point requirements for the entire test.
- No fogging was observed.

Total-Window Performance Test proved TriSeal advantage over aluminum spacer.

Computer simulations (performed at Enermodal Engineering Ltd., Kitchener, Ontario), comparing Kawneer's most popular glass package in a 6' x 6' window compared three important window performance criteria:

Spacer	Total-Window U-Value (BTU/h-ft²-F)	NFRC Condensation Resistance	Sill Temp. F degrees
TriSeal	0.417	51.6	39.7°F
Aluminum	0.437	46.4	33.6°F

Note: Tests were based on using Window 5.2 and Therm 5.2 as per NFRC 100-2001. Both units compared had PIB primary and silicone secondary seal. Low-E coating on side two of glass.

In comparing TriSeal vs. aluminum spacer in thermally-broken test windows described above, TriSeal:

- Lowered the Total Window U-Factor by over 5%.
- Raised the NFRC Condensation Resistance by over 10%.
- Raised the Sill Sightline Temperature by over 15%.

"With TriSeal, improved performance is only half the story," explains Braun. "Ease of fabrication and compatibility with existing equipment, materials and practices are the rest of the story. Moving from aluminum spacer to TriSeal does not require a 'leap of faith,' as fabricators can still use traditional PIB for sealing, and structural sealants for strength."

TriSeal simplifies Warm Edge I.G. fabrication.

Desiccant-filled with pre-applied side adhesive, Edgetech's new structural foam spacer significantly simplifies I.G. production:

- I.G. shapes are easier to make.
- TriSeal is pre-desiccated, so there is no desiccant filling of the spacer and no operator is required.
- Pre-applied PIB eliminates the extrusion process and manual application.
- Eliminates spacer production.
- Eliminates spacer inventory hanging on racks.
- Eliminates matching spacer frame to glass.

Braun notes that I.G. fabricators making the transition from aluminum to TriSeal could reduce line labor requirements by two to five people. "And, when you compare TriSeal's Warm Edge benefits, combined with its aesthetic advantages and improved productivity in assembly, it's sure to be a welcome addition to the Super Spacer family of products for both specifiers and I.G. customers."

Call Edgetech I.G. for a copy of the Super Spacer TriSeal Architectural Product Data Sheet. And look for TriSeal in the 2005 Sweets Catalog AEC File.