

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

TrueWARM®
s p a c e r s

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 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."

TriSeal brings TrueWARM spacer technology to structural glazing.

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 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 in a straight line and forms sharp 90-degree corners.

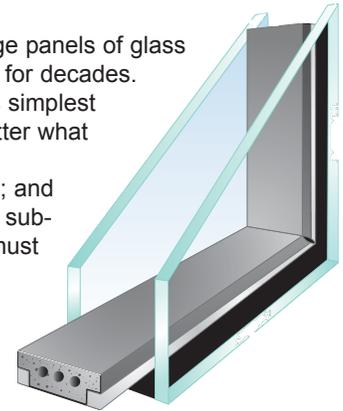
The only physical difference in TriSeal, notes Braun, is "We've added a 'T' section to the back of the spacer to support the pre-applied Polyisobutylene (PIB) sealant, that blocks moisture from invading the I.G. unit. TriSeal helps address architects' needs for dependable field-glazed structural panels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

"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 Super Spacer TriSeal does not require a 'leap of faith,' as fabricators can still use traditional PIB for sealing, and structural sealants for strength."

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

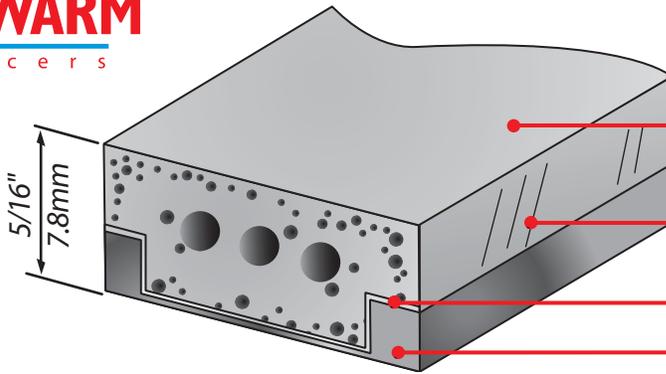
- I.G. shapes are much easier to make.
- TriSeal is pre-desiccated, so there is no desiccant filling of the spacer and no operator is required.
- Pre-applied PIB eliminates the extrusion process and manual application.
- Eliminates matching glass and spacer production as well as spacer inventory hanging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

Edgetech's 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."



Super Spacer® TriSeal

Technical Data



- Flexible silicone foam
- Pressure-sensitive acrylic adhesive
- Multi-layer vapor barrier
- Offered with or without PIB primary seal (Polyisobutylene)

Super Spacer TriSeal (with pre-applied PIB)

Width A (mm)	8mm	12.5mm	16mm	20mm
m/Reel	274	152	137	99
Part # with Pre-applied PIB	002080	002072	002076	002084

Width A (inches)	1/2"
Ft/Reel	500
Part # with Pre-applied PIB	002072

Continuous Packaged Length

For regular insulating-glass production, Super Spacer TriSeal is supplied on reels with the continuous packaged length varying depending on the spacer width.

Protective Packaging

To provide desiccant protection, the reels are sealed in moisture-proof foil bags and then packaged in high-density polyethylene bags. These double-packaged reels are then shipped in recyclable cardboard boxes.

Recommended sealants

Captured Glazing: ADCO Adco Therm Series, Bostik 5190 Series, Delchem 100 Series, H.B. Fuller Thermo-Seal Series, ACDO DSA-4002 Series, Bostik 9190 Series, Delchem 2000 Series, H.B. Fuller 5153 Series, PRC De-Soto International PRC-590 Series.
Structural Glazing: Dow Corning® 982 silicone insulating glass sealant (2 part) or Dow Corning® 3-0117 silicone insulating glass sealant (1 part).

Desiccant Systems

Over 40% by spacer weight is desiccant material, and the low-deflection blend primarily consists of 3A molecular-sieve material with a small percentage of silica gel for solvent adsorption.

Color Options

The standard Super Spacer TriSeal spacer color is black with black PIB. Additional color options available. Please contact Edgetech for more information.

Additional Requirements

Contact Edgetech for:

- Shuttle - Part # E-10300000
- Reel Stand - Part # 001078
- Liner Stripper - Part # E-10500000
- Final corner sealing strips
 - 8mm Part # 002064 (150 pieces per bag)
 - 1/2"/12.5mm Part # 002062 (150 pieces per bag)
 - 16mm Part # 002063 (150 pieces per bag)
 - 20mm Part # 002065 (150 pieces per bag)

REV 01/05



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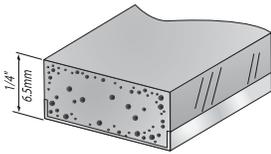
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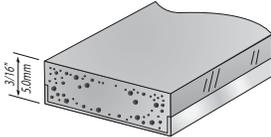
Super Spacer Selection Chart

for Architectural Captured Glazing Units

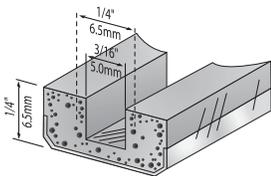
08810/EDG
BuyLine 5049



PREMIUM PLUS (greater than 65 sq. ft. IG unit)
Available from: 1/8" (3.0mm) to 13/16" (20.5mm) airspace
*Metric spacer widths are conversions to the nearest half millimeter from imperial sizes.
Standard Colors: Black, Warm Grey
Optional Colors: White, Aluminum Grey, Almond (Minimum Order = 5,000 ft./1,500 m)
Custom Options: As defined by Specifier (Minimum Order 50,000 ft./15,000 m)

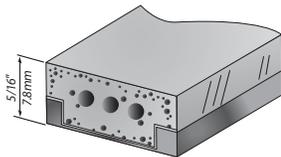


PREMIUM (less than 65 sq. ft. IG unit)
Available from: 3/16" (5.0mm) to 3/4" (19.0mm)
*Metric spacer widths are conversions to the nearest half millimeter from imperial sizes.
Standard Colors: Black, Warm Grey
Optional Colors: White, Aluminum Grey, Almond (Minimum Order = 5,000 ft./1,500 m)
Custom Options: As defined by Specifier (Minimum Order 50,000 ft./15,000 m)



CUSHION EDGE (largest size Insulating glass unit is 5' (1.5m) x 5' (1.5m))
Available from: 1/2" (12.5mm) to 13/16" (20.5mm)
*Metric spacer widths are conversions to the nearest half millimeter from imperial sizes.
Standard Color: Warm Grey
Optional Colors: Almond, Gold, Black (Minimum Order = 5,000 ft./1,500 m)
Custom Options: As defined by Specifier (Minimum Order 50,000 ft./15,000 m)

for Architectural Structural and Captured Glazing Units



SUPER SPACER® TRISEAL
Available sizes: 8mm, 12.5mm (1/2"), 16mm, and 20mm
*Metric spacer widths are conversions to the nearest half millimeter from imperial sizes.
Standard Color: Black
Optional Colors: White, Aluminum Grey, Almond (Minimum Order 5,000 ft./1,500 m)
Custom Options: As defined by Specifier (Minimum Order 50,000 ft./15,000 m)

COMPARISON OF SUPER SPACER PRODUCT PERFORMANCE

	Aluminum Spacer	Premium/Premium Plus	Cushion Edge	Super Spacer® TriSeal
Glass Surface Temperature	Poor	Excellent	Excellent	Excellent
Thermal Performance	Poor	Excellent	Excellent	Excellent
Condensation Resistance	Poor	Excellent	Excellent	Excellent
Edge Seal Integrity	Good	Excellent	Excellent	Excellent
Dew Point Drop	Good	Excellent	Excellent	Excellent
Sound Absorption	Good	Excellent	Very Good	Excellent
Sealant Stress Reduction	Good	Excellent	Very Good	Excellent
Compression Set	Good	Excellent	Very Good	Excellent
UV Resistance	Excellent	Excellent	Excellent	Excellent
Desiccant Capacity	Excellent	Excellent*	Very Good	Excellent
Structural Strength	Excellent	Excellent	Good	Excellent
Volatile Out-Gassing	Pass	Pass	Pass	Pass
Triple Glaze	With 2 Spacers	With 2 Super Spacers	Max 5' x 5'	With 2 Super Spacers
Wind Loading	Very Good	Excellent	Good	Excellent
Captured Glazing	Yes	Yes	Yes	Yes
Structural Glazing	Yes	No	No	Yes
Compatible with Performance Coatings	Yes	Yes	Yes	Yes
Standard Colors		Two	One	One
Optional Colors		Three; 5,000' min	Three; 5,000' min	Three; 5,000' min
Custom Colors		Yes; 50,000' min	Yes; 50,000' min	Yes; 50,000' min

*33% more than Premium



Ecole Notre Dame

"When it comes to condensation, the situation is simple. Parents, be they mothers or fathers, spend a lot more time in their children's classrooms these days, and so condensation on windows and pooling water on the sills are not an acceptable situation anymore. That's why we specified the maximum in warm-edge IG spacers and pultruded fiberglass frames."

Don Becker, Manasc Isaac Architects



University of Northern British Columbia

"Super Spacer® had come well-recommended by industry consultants. We haven't seen any problems, and for some of those windows, it's been almost 10 years now."

Russell Chernoff, Chernoff Thompson Architects

"So far, there has not been a single seal failure. Nobody notices any condensation. We couldn't be happier." (UNBC's five-building complex sports some 19 miles of Super Spacer.)

Jon Crooks, Facilities Manager



Swarthmore College

"We do a lot of special-shape work, but it's intermittent, so Super Spacer gives us the flexibility to turn it around promptly and professionally once orders arrive. Not only that, but being able to bring such fine art glass products to market and do so in a timely manner has actually ignited a lot of sales because people just didn't consider our products before."

Stephen Mitchell, Rudy Art Glass Studio



Vermont Law School

"In particular, these windows played a very important energy management role—even to the point of allowing us to dispense with perimeter heating in the building and all the piping and installation costs that entails."

Rolf Kielman, Truex Cullins & Partners



Holland Home Assisted Living

"Even though we are very condensation-prone here in central Michigan, I still wanted our windows clear of fog all year, despite the extra humidity load." Windows sealed with Super Spacer will remain condensation-free in moist, high-humidity areas—even by the pool.

Bob Israels, Israels Designs for Living



Royal Canadian Mounted Police "K" Division Headquarters

"The glass is a significant part of the architectural expression of the building, and from that point, it was very important we succeed, which I think we did. One issue we had to pay attention to was that we were near the municipal airport. To date, we haven't heard of any noise complaints from the users—and the building is only about half a mile south of the primary runway."

Ron Swart, Cohos Evamy Partners



Northgate Village - The Gateway Project

Property managers for the 330-unit apartment complex report seeing no condensation in the first winter, says Nicky Perry of Cowboy Properties. Acoustically, things seem to have gone as smoothly in the first year with no reported concerns regarding external noise at the near-central Salt Lake City location.



Four Points Sheraton Hotel

"It is our general policy to avoid metal in our choice of insulating glass and specify a spacer that doesn't transmit cold, facilitate condensation or especially in this case, reverberate sound."

Steve Cohlmeier, Cohlmeier Associates

Specifying Super Spacer®

PART 1 - GENERAL

References (contact Edgetech for details)

1. United States ASTM E773/774 for Class CBA.
2. United States NFRC label for Energy Star performance.
3. United States ASTM E2188/ E2189/ E2190 for HIGS.
4. Canadian CGSB 12.8 - M90, minimum 90% initial Argon fill (when required).
5. German DIN 1286 Teil 1 and 2 compliance.
6. Great Britain BSI testing compliance.
7. Norway NBI testing compliance.
8. Industry type P-1 testing, with a minimum of 40-week compliance.
9. European CEN 1279 Part 1,2 and 3
10. Spain SELLO-INCE

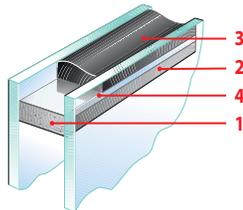
System Description

Super Spacer is a flexible, silicone foam product providing maximum perimeter insulation for sealed insulating glass units. It is desiccant filled with pre-applied sealant/adhesive for bonding to the glass with a vapor barrier backing.

Submittals

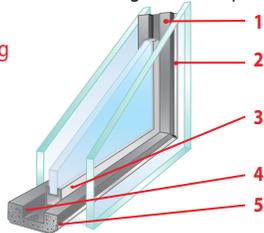
Super Spacer® **Premium Plus** and **Premium** are flexible, silicone foam spacers that provide the maximum in perimeter insulation for sealed glazing units.

- 1 Thermoset structural foam containing NO-Metal with integral 3A desiccant
- 2 Pre-applied sealant/adhesive for glass bonding
- 3 Secondary Sealant
- 4 Pre-applied advanced multi-layer vapor barrier



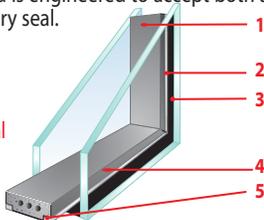
Super Spacer® **Cushion Edge** is a flexible, U-shaped silicone foam spacer used to wrap and cushion delicate, center-lite art glass and triple glazed units.

- 1 Thermoset structural foam containing NO-Metal with integral 3A desiccant
- 2 Pre-applied sealant/adhesive for glass bonding
- 3 Metal Cam
- 4 Pre-applied structural acrylic adhesive
- 5 Pre-applied advanced multi-layer vapor barrier



Super Spacer® **TriSeal** features a continuous vapor barrier backing across the profiled back of the spacer, and is engineered to accept both a butyl primary seal and a silicone secondary seal.

- 1 Flexible silicone foam
- 2 PIB primary seal
- 3 Silicone, Polyurethane, Polysulphide, DSE/DSA's or Hot Melt secondary seal
- 4 Pressure-sensitive acrylic adhesive
- 5 Pre-applied advanced multi-layer vapor barrier



Quality Assurance

Edgetech is an Energy Star® Partner. The company has also earned the Solar Company of the Year Award from the Solar Energy Society of Canada Inc. and the Crystal Achievement Award for our Health Smart Windows® program.

Warranty

Edgetech warrants that the Product (Super Spacer Premium Plus, Premium, TriSeal and/or Cushion Edge) will be free from manufacturing defects at the time of shipping from Edgetech. Further, Edgetech agrees to replace any Product (Super Spacer Premium Plus, Premium, Super Spacer TriSeal and/or Cushion Edge) that fails because of manufacturing defect. Super Spacer Premium Plus, Premium, Super Spacer TriSeal and/or Cushion Edge are guaranteed not to blister or bubble within 20 years of purchase.

This warranty applies under conditions of normal use by window manufacturers and does not apply to defects that result from intentional damage, improper storage or excessive exposure prior to use. This warranty does not apply to edge-seal workmanship, which is the responsibility of the insulating glass manufacturer.

PART 2 - PRODUCTS

Manufacturer

Edgetech I.G. Inc. • 800 Cochran Avenue • Cambridge, Ohio 43725
Ph: 740.439.2338 • Toll Free: 866.TRUEWARM • Fx: 740.439.0121
www.superspacer.com

Insulating Glass Units

Specification Description:

Super Spacer—a reverse dual seal design consisting of a thermoset foam spacer, proprietary multi-layer vapor barrier and preapplied sealant/adhesive for glass bonding requiring a secondary seal.

Recommended sealants for captured glazing: ADCO Adco Therm Series, Bostik 5190 Series, Delchem 100 Series, H.B. Fuller Thermo-Seal Series, ADCO DSA-4002 Series, Bostik 9190 Series, Delchem 2000 Series, H.B. Fuller 5153 Series, PRC De-Soto International PRC-590 Series.

Recommended sealants for structural glazing: Dow Corning® 982 Silicone Insulating Glass Sealant (2 part) or Dow Corning® 3-0117 Silicone Insulating Glass Sealant (1 part).

PART 3 - EXECUTION

Installation

No special procedures required for IG units fabricated with Super Spacer system.

Field Quality

No special inspection procedures required for IG units fabricated with Super Spacer system.

Protection

Follow usual requirements for protecting IG units.

AVAILABILITY Super Spacer products are available throughout the world through window manufacturers, dealers, distributors and direct from Edgetech I.G. Inc. For further information, technical data, specifications, samples or a list of insulating glass fabricators using Super Spacer products, please visit www.superspacer.com or call Edgetech at 866.TRUEWARM.

 **Edgetech**

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