SUPER SPACER® STRUCTURAL SILICONE SPACER SYSTEMS FOR HIGH-PERFORMANCE, WARM EDGE INSULATING GLASS UNITS

Quanex
building products

www.Quanex.com

WHAT IS WARM EDGE TECHNOLOGY?

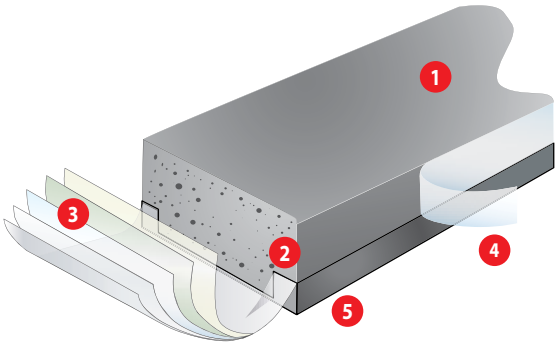
"Warm Edge" refers to the thermal conductivity of the spacer used to separate the lites of an insulating glass unit. If the spacer material is less conductive than conventional aluminum, it is called warm edge. Most of the newer spacers perform better than aluminum, but still contain some metal, and this metal is highly conductive.

WHAT IS SUPER SPACER?

Super Spacer® is an extruded, thermoset polymer structural silicone spacer with integrally incorporated desiccants. The shape of the thermoset polymer material is set during heat curing and can't be reshaped through reheating. Super Spacer retains its flexibility over a wide temperature range, always returns to its original cured shape and has a low compression set. The silicone formula of Super Spacer exhibits excellent resistance to ozone, sunlight, oxidation and has excellent color stability.

SUPER SPACER CONSTRUCTION

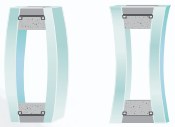
1. Smooth, matte finish guaranteed against blistering and bubbling.
2. Thermoset silicone matrix.
3. Proprietary multi-layer vapor barrier.
4. Structural adhesive combines with perimeter edge sealant for dual seal performance and durability.
5. Captive PIB primary seal for triple seal unit longevity (with Super Spacer TriSeal™).



STRUCTURAL BENEFITS OF SUPER SPACER SYSTEMS

REDUCES SEALANT STRESS

Super Spacer's thermoset silicone polymer material expands and contracts and always returns to its original shape. Rigid spacers do not accommodate the natural expansion and contraction caused by glazing pressure, thermal expansion, wind loads and barometric pressure. The results are stress cracks and sealant movement that eventually lead to seal failure. Super Spacer sealed IG units last up to five times longer in durability tests than conventional single seal units. Super Spacer features superior Argon and Krypton gas retention.



PROMOTES SOUND ABSORPTION

The closed-cell polymer of Super Spacer transmits very little sound compared to conventional aluminum or less-metal warm edge spacers. We recommend the use of Super Spacer wherever noise from airplanes, trains or automobiles may be a problem for building occupants.

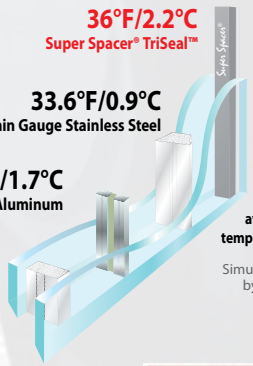
IMPROVES CONDENSATION RESISTANCE

Mold needs moisture to grow. The significantly reduced tendency of IG units fabricated with Super Spacer to exhibit interior condensation or frosting means that the health problems associated with mold may be virtually eliminated. Research done by Health Canada found that Super Spacer helped IG units stay in the optimum low-humidity zone that prevents mold and bacteria growth.

NO MOLD

THE NO-METAL ADVANTAGE

The edge of an IG unit is the most vulnerable part of the glass to heating and cooling losses, condensation and frosting. Quanex's Super Spacer contains NO-Metal and is one of the most thermally efficient IG spacers available in the market today.



Simulations performed by WSP Canada Ltd. [QBP17M00614]

GLOBALLY TESTED AND PROVEN PERFORMANCE

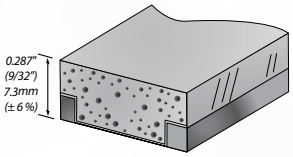
Super Spacer is the world's first polymer, NO-Metal warm edge spacer. Over 1 billion feet of Super Spacer has been used worldwide since the start of production in 1989. The company received the 1994 "Solar Company of the Year" award issued by Solar Energy Society of Canada, Inc. Super Spacer was awarded the DWM Green Product Award in both 2009 and 2010.

Test Data is available to show that IG made with Super Spacer meets and/or exceeds standards used in the USA, Canada, Europe and many other locations around the globe. Super Spacer also meets Dade County Hurricane standards and is globally recognized by it's Passive House certification.

arctic climate
phA+
CERTIFIED COMPONENT
Passive House Institute

SELECTING SUPER SPACER

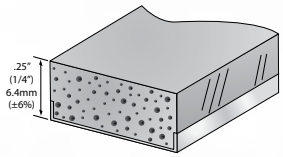
ARCHITECTURAL STRUCTURAL AND CAPTURED GLAZING UNITS



TRISEAL™

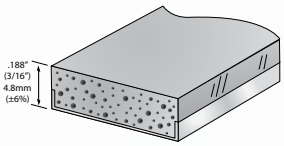
Available Sizes:	0.323" (8.2mm) to 0.874" (22.2mm) airspace
Standard Colors:	Black and Grey
Optional Colors:	Are Available (Minimum Order Required)
Custom Options:	As defined by Specifier (Minimum Order Required)

ARCHITECTURAL CAPTURED GLAZING UNITS



PREMIUM PLUS

Available Sizes:	0.125″ (3.2mm) to 0.787″ (20.0mm) airspace
Standard Colors:	Black and Grey
Optional Colors:	Are Available (Minimum Order Required)
Custom Options:	As defined by Specifier (Minimum Order Required)



PREMIUM

Available Sizes:	0.188″ (4.8mm) to 0.787″ (20.0mm) airspace
Standard Colors:	Black and Grey
Optional Colors:	Are Available (Minimum Order Required)
Custom Options:	As defined by Specifier (Minimum Order Required)

PLANT TRANSFORMATION POWERING QUALITY PRODUCTIVITY

AUTOMATION AT ITS BEST

With the recent spike in technological advances in manufacturing and industry 4.0, producing high quality IG units with precise and deliberate efficiency has moved from a dream into a reality. Using warm edge flexible Super Spacer, the process becomes even more seamless, providing the ability to produce over 1200 units per shift, making the combined potential of our products and high speed vertical lines endless.

Being fully automated means production facilities using Super Spacer are moving from outdated crowded shop floors to ergonomic fully automated and streamlined production of the future. The benefits of this reach to all areas of the industry including OEM's, Architects, and even competing component manufacturers.

UNPRECEDENTED PRODUCTION ACCURACY

- Increased unit output per shift
- Less scrap generated, creating more $$$

REDUCED TOUCH POINTS

- Highest level of quality removing human error from the equation
- Lower overall production cost of each unit

COMPLETE PEACE OF MIND

All of these elements combined give you complete peace of mind when using our Super Spacer products, which have been globally tested and proven for over 30 years. For the perfect balance of highest quality and long lasting durability, look no further than the edge of Super Spacer.

SPECIFYING SUPER SPACER®

PART 1 - GENERAL

References (contact Quanex for details)

1. North America ASTM E2188/ E2189/ E2190
2. European EN 1279
3. Canadian CGSB 12.8
4. ASTM E330 (120* psf positive, 155* psf negative)
5. French Standard CSTB for CEKAL
6. Industry type P-1 testing

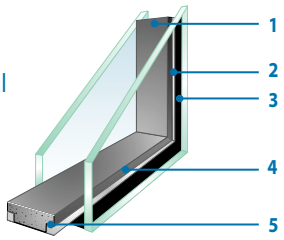
** no failure; maximum limitations of testing equipment*

System Description

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

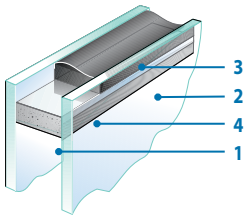
Submittal Super Spacer® TriSeal™ features a continuous vapor barrier backing across the profiled back of the spacer and is engineered to accept both a butyl primary seal and a silicone secondary seal.

1. Thermoset structural silicone containing NO-Metal with integral desiccant
2. PIB primary seal
3. Silicone, Polyurethane, Polysulfide, DSE/DSA's or Hot Melt secondary seal
4. Pressure-sensitive acrylic adhesive
5. Pre-applied advanced multi-layer vapor barrier



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

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



Quality Assurance

The company has also earned the Solar Company of the Year Award from the Solar Energy Society of Canada Inc., the DWM Green Product award and the Crystal Achievement Award for various marketing programs. In addition to this Quanex Super Spacer is Passive House certified and globally recognized .

Warranty

Quanex warrants that the Product (Super Spacer Premium Plus, Premium and/or TriSeal) will be free from manufacturing defects at the time of shipping from Quanex. Further, Quanex agrees to replace any Product (Super Spacer Premium Plus, Premium and/or TriSeal) that fails because of manufacturing defect. Super Spacer Premium Plus, Premium, and/or TriSeal are guaranteed not to blister or bubble within 40 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

- Quanex Building Products • 800 Cochran Avenue • Cambridge, Ohio 43725 • USA T: 740.439.2338 • Toll Free: 866.TRUEWARM • F:740.439.0121 www.Quanex.com
- Edgetech I.G. Inc. UK • Stonebridge House, Rowley Drive • Stonebridge Trading Estate • Coventry CV3 4FG • England T: +44 (0)8700.566.844 F: +44 (0)2476.639.727 ukenquiries@edgetechig.com www.superspacer.co.uk
- Edgetech Europe GmbH • Gladbacher Strasse 23 • 52525 Heinsberg • Germany T: +49 (0)2452.96491.0 • F: +49 (0)2452.96491.11 info@edgetech-europe.com www.superspacer.com

Insulating Glass Units Specification Description:

Super Spacer TriSeal — a triple seal design suitable for Structural Glazing, consisting of a thermoset silicone spacer incorporating integral desiccant, pre-applied adhesive for glass bonding, a captive polyisobutylene primary seal, and a structural seal.

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

Please refer to www.superspacer.com for recommended IG sealants

Technical Bulletin RDQ0024

PART 3 - EXECUTION

Installation

No special procedures required for Insulating Glass units fabricated with the Super Spacer system; limit spacer compression at installation to 1mm.

Field Quality

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

Protection

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Waterless printing on FSC certified paper, recycled with 10% post consumer waste.

AVAILABILITY Super Spacer products are available throughout the world through insulating glass manufacturers, dealers, distributors and direct from Quanex Building Products. Please contact the location nearest you for further information, technical data, specifications, samples or a list of insulating glass fabricators using Super Spacer.

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