



System Solutions for Structural Glazing



H.B. Fuller



KÖMMERLING



MODERN FAÇADE TECHNOLOGY ON THE HIGHEST LEVEL

Unlike most other materials, glass represents lightness, timeless elegance and transparency. This is why glass façades have significant impact on modern architecture and have defined our cityscapes since decades. On the one hand, they must satisfy the most demanding aesthetic expectations; on the other hand, as smart technical systems, they must fulfil a multitude of construction-relevant functions. These requirements are reconciled perfectly by all-glass façades built with structural glazing where the glass elements are bonded to a supporting substructure.

Our high-performance adhesive solutions deliver with their exceptional mechanical strength combined with excellent elasticity. This special glass bonding technique works effectively due to a completely homogeneous glass surface without visible mounting or retaining elements. Structural glazing façades therefore dazzle the eye with their uniform, consistent glass look. With their fascinating designs, they must endure extreme climatic changes and ensure the highest quality for many years. To accommodate these high requirements, H.B. Fuller | KÖMMERLING has developed special system solutions for structural glazing.

Join us on the journey through fascinating and limitless design possibilities!

BENEFITS OF STRUCTURAL GLAZING

DESIGN

- ✚ Aesthetically pleasing and architecturally sophisticated solutions
- ✚ All functions can be combined in the selected glass design
- ✚ Easy to upgrade old façades

PRODUCTION

- ✚ Module technique
- ✚ Pre-production ensures high quality
- ✚ Weather-independent production ensures on-time delivery
- ✚ High output

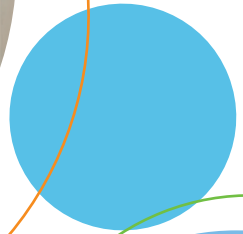
ADDED VALUE

- ✚ High energy efficiency
- ✚ Reduced maintenance and cleaning
- ✚ Improved heat, sun and sound protection
- ✚ Excellent façade tightness



Structural Glazing projects are becoming more sophisticated architecturally and are also technically more complex.

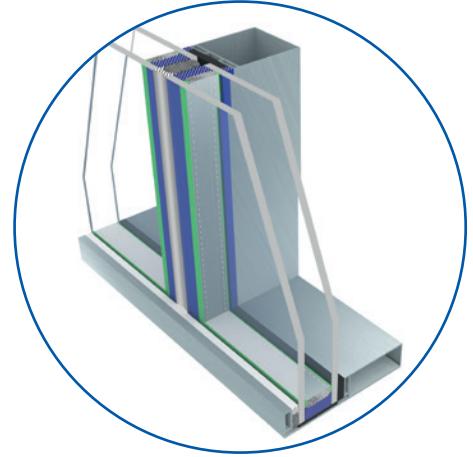
Our customers can count on individual and diverse consulting and support services during the entire duration of a project.



STRUCTURAL GLAZING TYPES

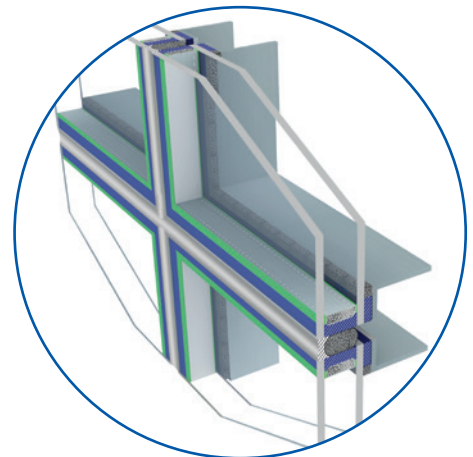
TWO-SIDED STRUCTURAL GLAZING SYSTEM

Two opposite glass edges are bonded to the load bearing framework. The two other edges are fixed mechanically by securing profiles. The bonding can occur vertically as well as horizontally. Dynamic loads will be absorbed through the structural glazing silicone whereas the dead load will be transferred to the securing profiles.



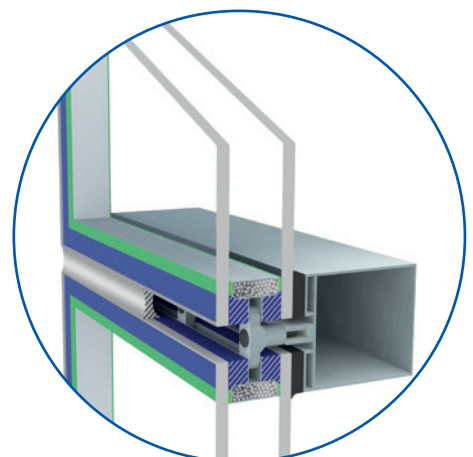
FOUR-SIDED STRUCTURAL GLAZING SYSTEM

All four sides of the glass elements are bonded to a frame which will be subsequently attached to the substructure on site. Depending on the construction, the dead load will be transferred either mechanically or through the structural glazing silicone. With a four-sided structural glazing system, no mounting will be visible from the outside. The result is an aesthetically pleasing all-glass façade.

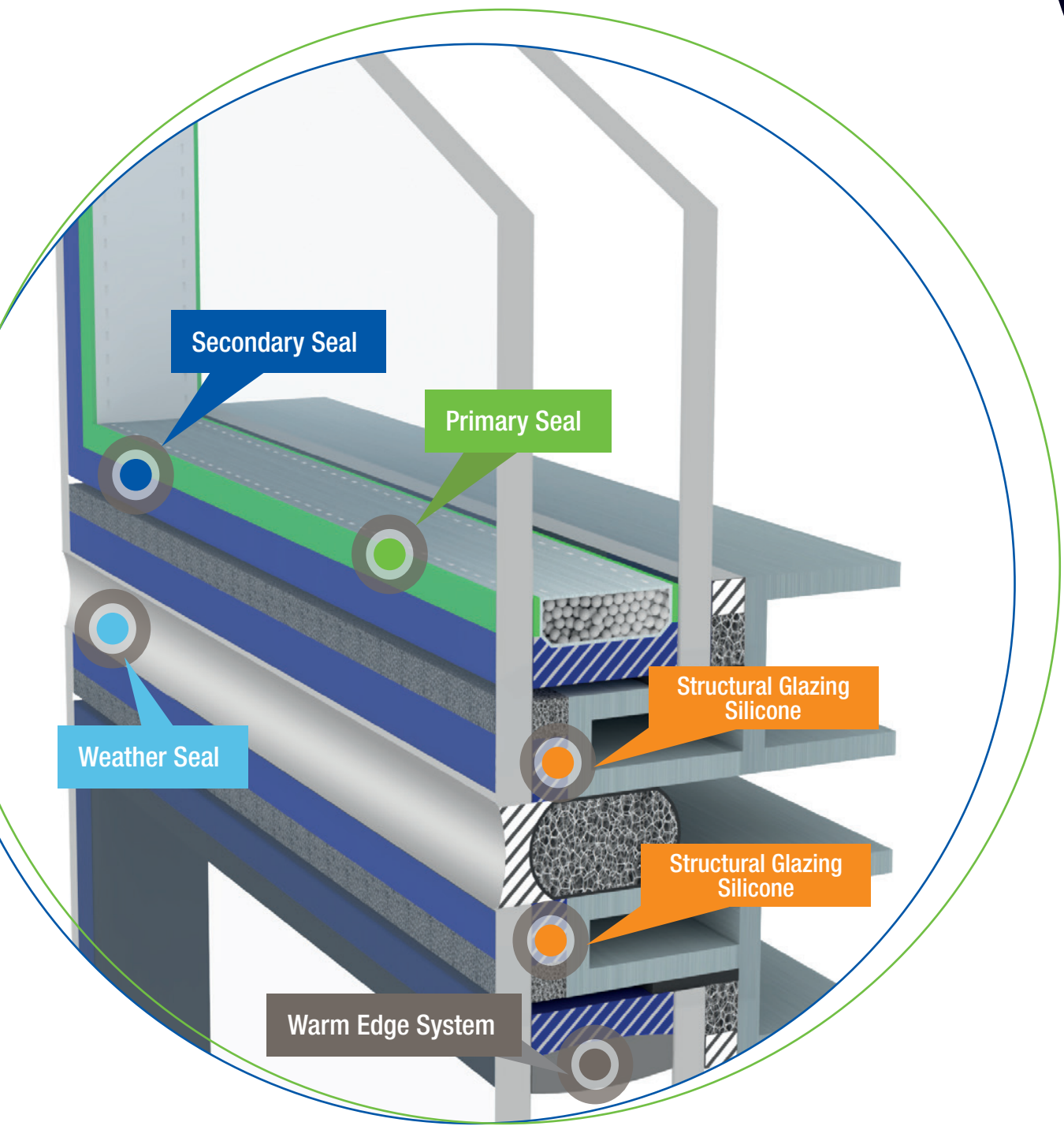


STRUCTURAL GLAZING TECHNIQUE WITH U-PROFILE SYSTEM

In addition to the regular structural glazing system, there is increasing use of the so-called U-Profile system, which allows fixing of the insulating glass units to the substructure. Here the aluminium or stainless steel U-profiles are embedded into the secondary sealing during fabrication. Mechanical fixing is achieved with the help of fixing points that are embedded into the integrated U-Profile.



PRODUCT OVERVIEW



Structural Glazing Silicone
2-component Silicone
Ködiglaze S

Primary Seal
Polyisobutylene
GD 115

Secondary Seal
2-component Silicones
Ködiglaze S
GD 920

Weather Seal
1-component Silicone
GD 826 N

Warm Edge System
Polyisobutylene
KÖDISPACE 4SG



PRODUCT PROPERTIES

Ködiglaze S

2-component structural glazing silicone

- + Also for mechanically unsupported systems
- + High mechanical strength and elasticity
- + Neutral curing system
- + For automated processing
- + Meets the requirements of EN 1279 part 2 and part 3
- + Label ETA 08/0286 (ETAG 002), Label SNJF VEC, Label CE

GD 826 N

1-component insulating glass silicone

- + For weather sealing
- + Elastic with high movement capacity
- + Neutral curing system
- + Meets the requirements of DIN 18545
- + Proven compatibility with H.B. Fuller | KÖMMERLING structural glazing silicones according to ETAG 002

GD 920

2-component insulating glass silicone

- + For mechanically supported systems
- + High strength
- + For automated processing
- + For all types of insulating glass in façade construction
- + High modulus
- + Meets the requirements of EN 1279 part 2 and part 3
- + Label ETA 08/0004 (ETAG 002), Label SNJF VI-VEC, Label CE

GD 115

Polyisobutylene

- + Very low water vapor transmission and gas permeation rate
- + Good adhesion properties to glass and spacer
- + Proven compatibility with H.B. Fuller | KÖMMERLING structural glazing silicones according to ETAG 002

THE HIGH PERFORMANCE WARM EDGE SYSTEM

FOR LIMITLESS DESIGN POSSIBILITIES WITH HIGHEST ENERGY EFFICIENCY

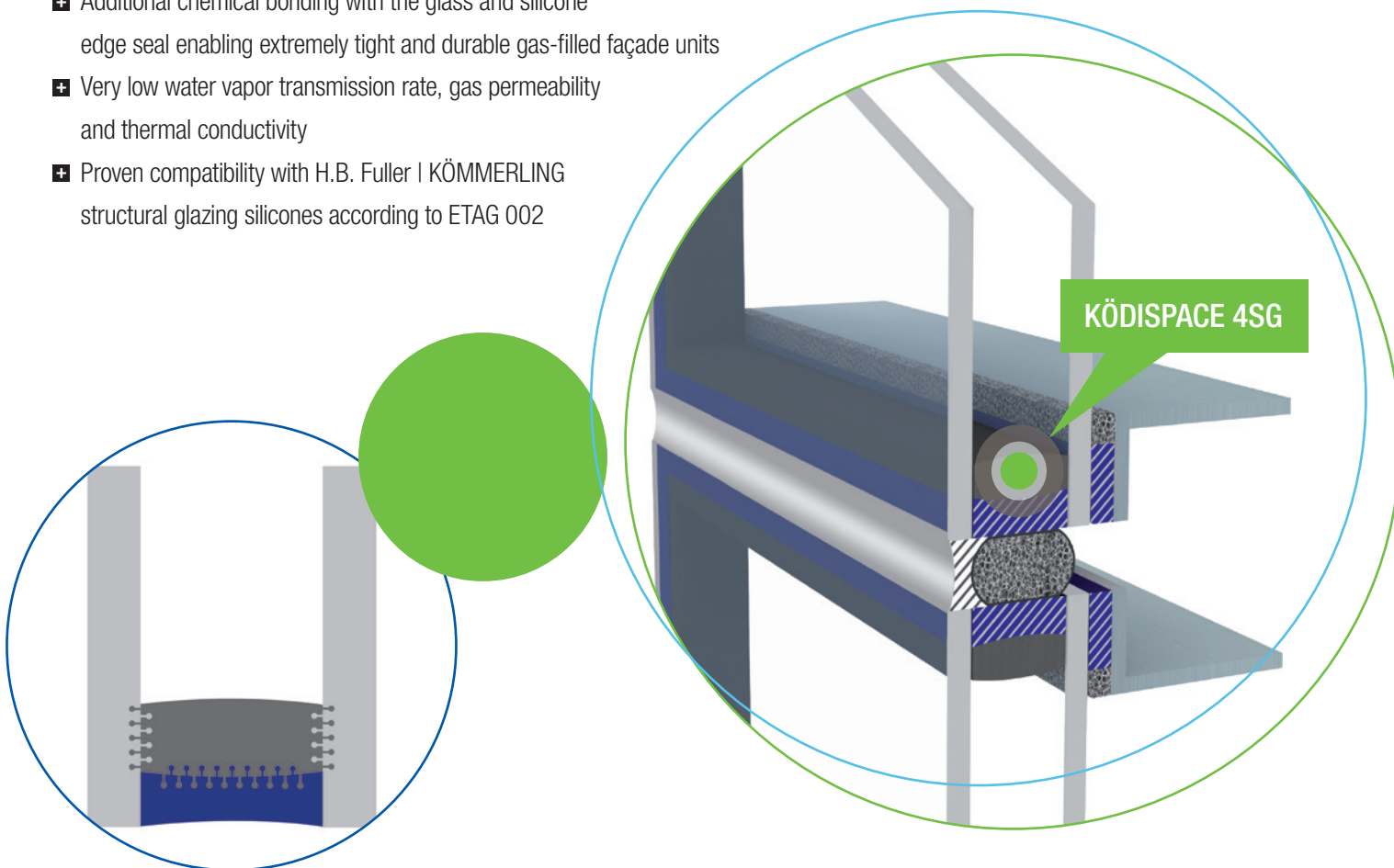
Our reactive thermoplastic warm edge system KÖDISPACE 4SG was developed specifically for structural glazing applications and thus meets the strict of constituent requirements far better than the majority of other systems. Physical forces on the one hand lead to quick initial adhesion, while the additional, unique chemical bonding to glass and silicone ensures outstanding long-term stability on the other. These attributes make KÖDISPACE 4SG an extremely robust and durable warm edge system that is perfectly suited to structural glazing applications in all climate zones.

In addition KÖDISPACE 4SG compensates for all potential deformations in the edge seal through the flexibility of the material. The warm edge system therefore guarantees permanent gas tightness also under most demanding conditions, even in cold-bent insulating glass units.

KÖDISPACE 4SG

Polyisobutylene

- ✚ For structural glazing applications in all climate zones
- ✚ Additional chemical bonding with the glass and silicone edge seal enabling extremely tight and durable gas-filled façade units
- ✚ Very low water vapor transmission rate, gas permeability and thermal conductivity
- ✚ Proven compatibility with H.B. Fuller | KÖMMERLING structural glazing silicones according to ETAG 002



The additional chemical bond built between KÖDISPACE 4SG and the silicone edge seal and glass offers substantial benefits:

- ✚ Stable edge seal by bonding individual components on a molecular level
- ✚ Robust against glazing errors
- ✚ Extended service temperature from -40 °C to +90 °C
- ✚ Certified as per EN1279 parts 2 & 3

COMPLEMENTARY PRODUCTS

PRIMERS AND CLEANERS

The most important factor in a successful structural glazing applications is the reliable bonding of the adhesive to the material surface. To ensure this, the surface has to be thoroughly cleaned before bonding. The bonding and the adhesion between substrate and adhesive can be improved by the use of a primer. H.B. Fuller | KÖMMERLING has developed primers and cleaners specifically for the pre-treatment of metal and glass surfaces. As these products are expressly adapted to the materials to be bonded, as well as to the H.B. Fuller | KÖMMERLING silicones for structural glazing, they can achieve the greatest possible effectiveness:

Körabond HG 78

Primer for the pre-treatment of anodized aluminium or stainless steel

Körasolv GL

Cleaner for anodized aluminium, stainless steel and glass

Körasolv WL

Cleaner for powder-coated aluminium

Körasolv Silicone

Cleaner for 2-component silicone mixing and dosing machines

Köralub SI

Lubricant for seals, plungers and cylinders of silicone application machines





ENVIRONMENTAL CONSIDERATIONS

H.B. Fuller actively manages the environmental impact of our operations, people, and products. We monitor our environmental footprint and continually innovate for improved sustainability in our products and manufacturing practices. We also collaborate with customers to create adhesive and sealant solutions that allow them to meet their sustainability goals. Our products help customers save energy, reduce waste, and enable recycling and re-use.

Sustainable business practices are not only good for our environment, they also help our company grow responsibly, positioning H.B. Fuller for long-term success and making a difference for our customers, employees, and the planet.

- ✚ H.B. Fuller is fully committed to the Sustainable Development Goals of the United Nations
- ✚ Optimized internal processes with a clear focus on our environmental responsibilities
- ✚ Accreditation to ISO 9001, ISO 14001, ISO 45001 and ISO 50001

WE ARE YOUR RELIABLE PARTNER

The demands placed on the mechanical performance and life cycle properties of our products require a dedicated team delivering a diverse and comprehensive technical service to our partners across all of our application ranges.

At H.B. Fuller | KÖMMERLING our passion for customer partnerships is best demonstrated by our commitment to technical support for both product understanding and application process assistance utilizing our extensive, long term understanding of material behavior and properties added to first class facilities at our research and development centers. Our support does not stop there, we are renowned for the part we play in improving and perfecting process and application technology on-site with our partners.

From analyzing and improving the performance of existing materials, developing materials for new applications or delivering world class training H.B. Fuller | KÖMMERLING is recognized as a global market leader.



Competence & Service

Our Service Portfolio

- + Adhesion & compatibility tests
- + Material stress tests
- + Life cycle testing
- + Joint design and calculation
- + Modulus and Finite Element Analysis
- + Market leading laboratory facilities
- + On-site process assistance
- + In house training
- + Quality assurance programs

THE HIGHEST SAFETY LEVEL FOR YOUR SYSTEM

Structural glazing projects are becoming more and more demanding not only in their architectural aspects, but also in their technical requirements. To ensure the success of the application, close cooperation between architects, façade manufacturers and suppliers from the glass, adhesives and sealants industry is essential.

H.B. Fuller | KÖMMERLING offers a complete range of products for the glass industry, including structural glazing and reactive thermoplastic warm edge system KÖDISPACE 4SG, as well as other insulating glass sealants based on butyl, polysulfide, polyurethane and silicone. All materials are matched to each other. With these system solutions from a single source, we ensure products and systems are designed, manufactured and tested to the highest standards.

Our global team is a system provider, offering not only high-quality products, but also individual consulting and support services tailored to the customers and their needs over the entire duration of a project.





H.B. Fuller



KÖMMERLING

For more information about our company, visit www.hbfuller.com or www.koe-chemie.com



Join the Conversation | www.hbfuller.com/connect

IMPORTANT: It is the user's responsibility to test and determine the suitability of a product for the user's intended use. Any product samples provided for testing are provided in accordance with standard limited warranties as stated on our technical data sheets.

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