



SYSTEM SOLUTIONS FOR STRUCTURAL GLAZING

Modern Façade Technology on the Highest Level



KÖMMERLING
KÖMMERLING CHEMISCHE FABRIK GMBH



STRUCTURAL GLAZING

MODERN GLASS ASSEMBLY TECHNIQUE USED IN FAÇADE ENGINEERING

Unlike most other materials, glass is a material that represents lightness, timeless elegance and transparency. This is why glass façades have had a significant impact on modern architecture and have defined our cityscapes for 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.

This special glass bonding technique allows achieving maximum effect 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 climate influences that may be extreme, and preserve their quality for many years. To accommodate these high requirements, KÖMMERLING has developed special system solutions.

Benefits of Structural Glazing

Design

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

Production

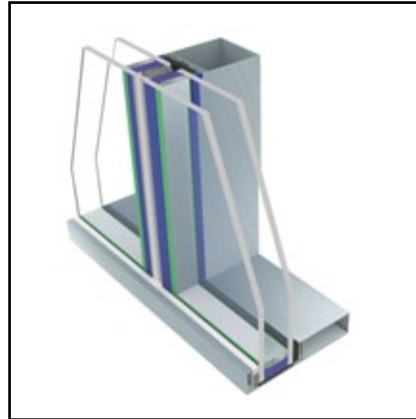
- ✚ Module technique
- ✚ Pre-production ensures high quality
- ✚ Weather-independent production ensures on-time delivery
- ✚ High output

Added value

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

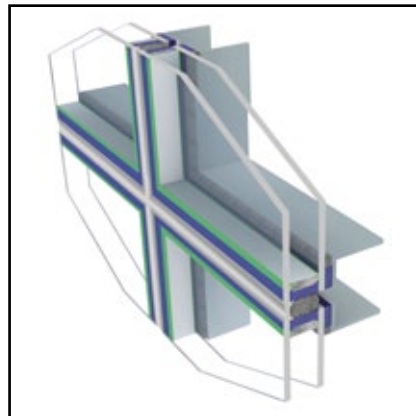
Two-Sided Structural Glazing System

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. The dynamic loads will be absorbed from the structural glazing silicone whereas the dead load will be transferred to the securing profiles.



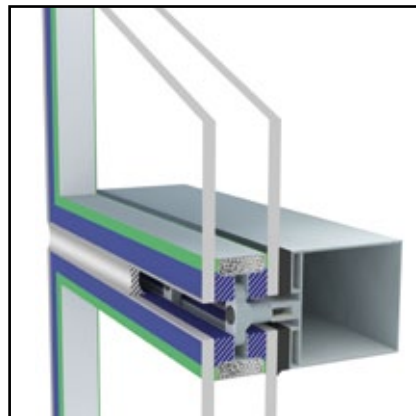
Four-Sided Structural Glazing System

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.



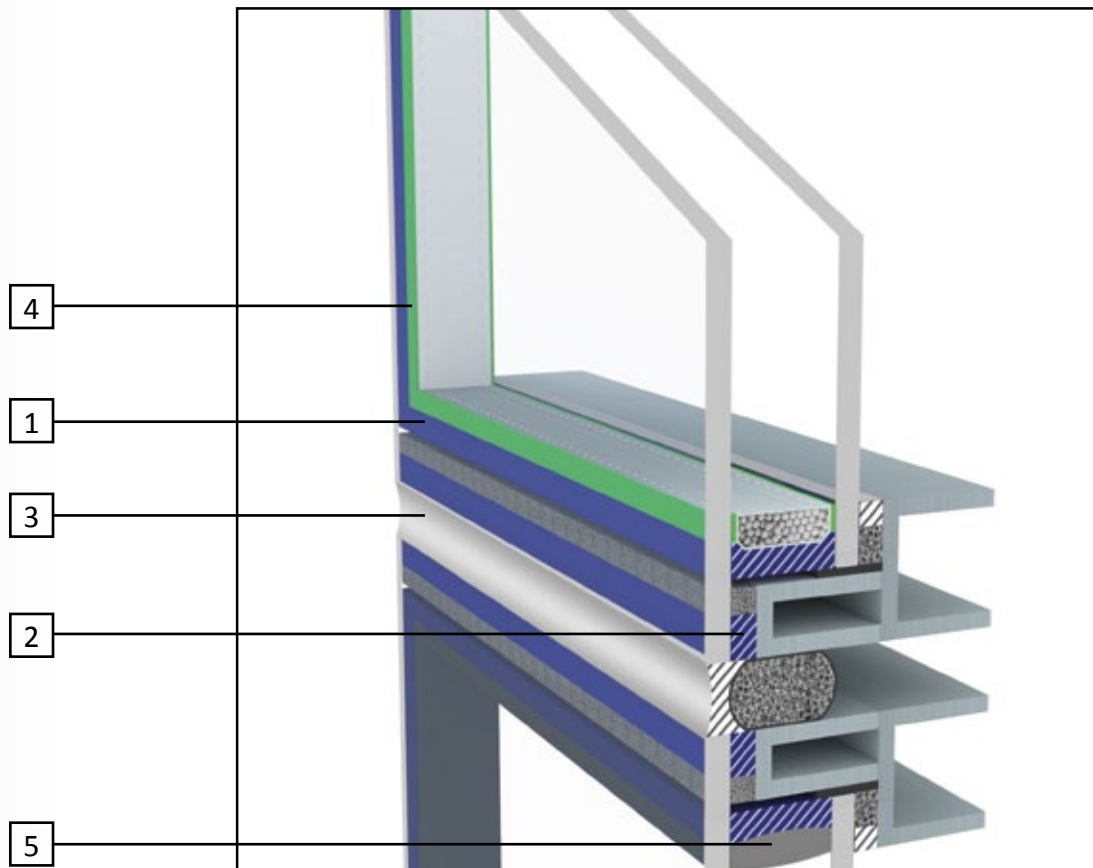
Structural Glazing Technique with U-Profile System

In addition to the regular structural glazing system, there is increasing use of the so-called U-Profile system, which allows fixing 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, which are embedded into the integrated U-Profile.



PRODUCT OVERVIEW FOR STRUCTURAL GLAZING

Our high-performance, silicone-based structural glazing products guarantee that glass façades will preserve their quality for years to come. With Ködispace 4SG, our Warm Edge System developed specifically for use in façades, extremely tight and durable gas-filled façade glass panes can be realised.



1 Secondary Sealants

2-Component Silicones
Ködiglaze S
GD 920

2 Structural Glazing

2-Component Silicone
Ködiglaze S

3 Weather Sealing

1-Component Silicone
GD 826 N

4 Primary Seal

Polyisobutylene
GD 115

5 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 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 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 KÖMMERLING structural glazing silicones according to ETAG 002

GD 115

Polyisobutylene

- Very low water vapour transmission and gas permeation rate
- Good adhesion properties to glass and spacer
- Proven compatibility with KÖMMERLING structural glazing silicones according to ETAG 002

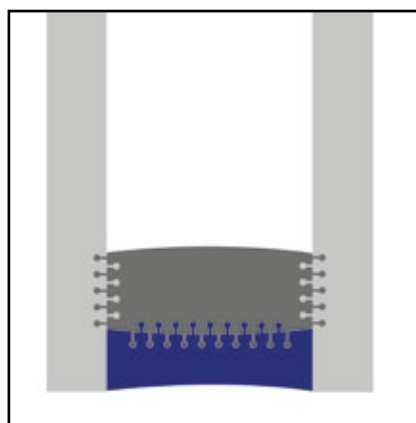


WARM EDGE SYSTEM

KÖDISPACE 4SG

Polyisobutylene

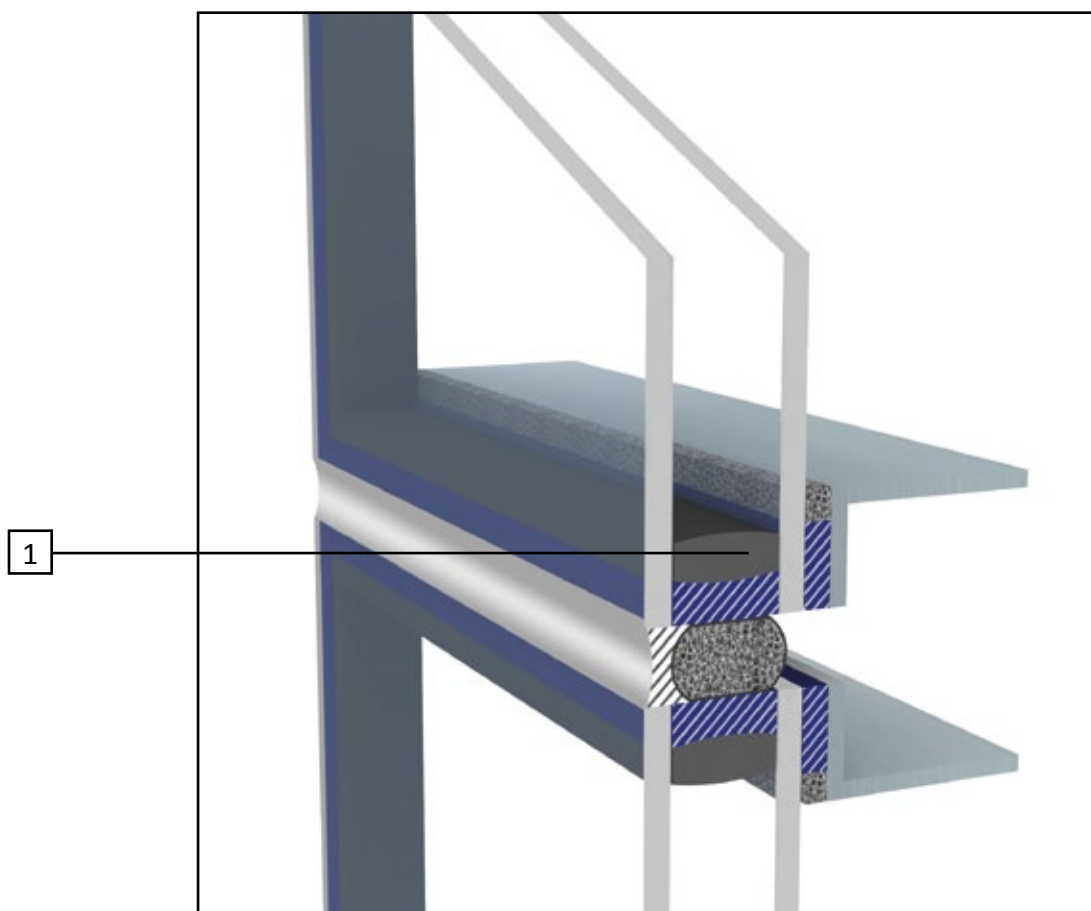
The use of Ködispace 4SG, the new generation of thermo-plastic Warm Edge System, allows the complete substitution of conventional spacer systems, which usually consist of a metal or plastic spacer, desiccant and primary sealant. In contrast, Ködispace 4SG is a polymer matrix with integrated desiccant, which meets the high requirements regarding long-term stability and, in particular, the demands for gas tightness of insulating glass units with silicone secondary sealing.



Ködispace 4SG forms a chemical bond with the glass and with the silicone seal.

WARM EDGE SYSTEM FOR STRUCTURAL GLAZING

Ködispace 4SG was developed specifically as a Warm Edge System for structural glazing and meets the associated high demands better than virtually any other system. Physical forces ensure fast initial adhesion on the one hand, while the newly developed additional chemical bonding with glass and silicone results in excellent long-term stability on the other hand. This makes Ködispace 4SG a very robust and resilient Warm Edge System, especially suitable for structural glazing applications in areas with extreme temperatures.



1 Ködispace 4SG

Polyisobutylene

- Greater adhesion to glass and silicone secondary sealants
- Very low water vapour transmission rate and gas permeability
- Low thermal conductivity
- Meets the requirements of EN 1279 part 2 and part 3 in combination with GD 920 or Ködiglaze S
- Proven compatibility with KÖMMERLING structural glazing silicones according to ETAG 002



COMPLEMENTARY PRODUCTS

PRIMERS AND CLEANERS

The most important factor in a successful structural glazing application is the reliable bonding of the adhesive to the material surface. To ensure this, the surface has to be thoroughly cleaned before bonding. Furthermore, the adhesion between substrate and adhesive can be improved by the use of a primer. 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 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

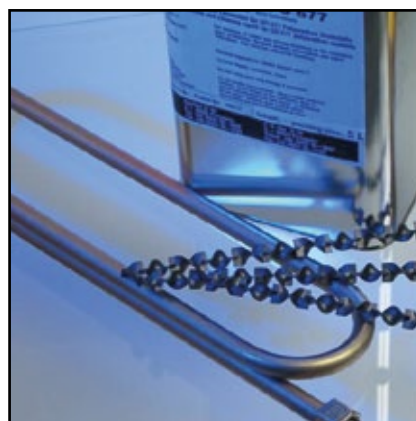
- Cleaner for powder-coated aluminium

Körasolv Silicone

- Cleaner for 2-component silicone mixing and dosing machines

Köralub SI

- Lubricant for seals, plungers and cylinders of silicone application machines





KÖMMERLING – YOUR SYSTEMS PARTNER

COMPETENCE AND SERVICE

Structural glazing projects are becoming more and more demanding not only in their architectural aspects, but also in the 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.

KÖMMERLING offers a complete product range for the glass industry, including structural glazing and the 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, KÖMMERLING ensures the highest level of safety for the system.

KÖMMERLING considers itself a system provider, offering not only high-quality products, but also individual consulting and support services tailored to its customers and their needs over the entire duration of a project.



OUR SERVICE PORTFOLIO

- Checking of joint design and calculation of joint dimensions
- Adhesion testing
- Compatibility tests
- Application training at the processor's site
- Support for working with independent laboratories for external testing
- Development of quality assurance programmes





KÖMMERLING WORLDWIDE

Germany

KÖMMERLING CHEMISCHE FABRIK GMBH
Zweibrücker Straße 200
66954 Pirmasens

Phone +49 6331 56-2000
Fax +49 6331 56-1999
E-mail info@koe-chemie.de
www.koe-chemie.de

United Kingdom

KOMMERLING UK LTD.
27 Riverside Way
UB8 2YF Uxbridge Middlesex

Phone +44 1895 465600
Fax +44 1895 465617
E-mail info@kommerlinguk.com
www.kommerlinguk.com

France

KOEMMERLING CHIMIE SARL
7, Rue des Corroyeurs
67200 Strasbourg

Phone +33 388 28-8359
Fax +33 388 28-2223
E-mail info.france@koemmerling.com
www.koe-chemie.com

USA

ROYAL ADHESIVES AND SEALANTS
2001 West Washington Street
South Bend, IN 46628

Phone +1 574 246-5000
Fax +1 574 246-5425
E-mail info@royaladhesives.com
www.royaladhesives.com

China

KÖMMERLING CHEMISCHE FABRIK GMBH
1007 Air China Plaza, 36 Xiaoyun Road,
Chaoyang District,
Beijing 100027, P.R.China

Phone +86 10 6461 9988
Fax +86 10 6461 9900
E-mail info@koe-chemie.cn
www.koe-chemie.cn

Russia

KÖMMERLING CHEMISCHE FABRIK GMBH
Kozjubinskogo Geb. 4, Bau 3, Nr. 331
121351 Moskau

Phone +7 495 4435445
E-mail info@koe-chemie.de
www.koe-chemie.com



KÖMMERLING

KÖMMERLING CHEMISCHE FABRIK GMBH

A group member of



ROYAL
ADHESIVES & SEALANTS