

SYSTEM SOLUTIONS FOR WINDOW BONDING

Edge Seal and Bonding Media from a Single Source



H.B. Fuller



KÖMMERLING



WINDOW BONDING

NEW DESIGN POSSIBILITIES IN WINDOW CONSTRUCTION

As traditionally used in the automotive industry, the special advantages of direct glazing are nowadays also exploited in window bonding. This means that the insulating glass is bonded with the window sash, which leads to significant improvements in the window's static properties. Load transfer no longer occurs selectively, but rather over the entire bonding area. This allows for thinner frames, lower weight, larger pane sizes and unusual window shapes.

KÖMMERLING has developed a special product range for this innovative technology. With a comprehensive overall concept, it offers insulating glass and adhesive technologies from a single source.

Benefits of Window Bonding

Cost Reduction

- + Less or no steel
- + Fewer or no setting blocks
- + Reduces assembly time
- + Lower service costs
- + Automated production process

Design

- + New design possibilities
- + Slimmer profiles
- + Higher proportion of glass

Added Value

- + Improved anti-intrusion protection
- + Improved U value
- + Reduced maintenance
- + More light entering the building



WINDOW BONDING VARIANTS

PRODUCT OVERVIEW

Direct glazing can be realised with all types of window frame material, from wood via plastic to aluminium. Depending on the profile system, different bonding positions are possible: overlap, rebate and glass edge.

With Ködiglaze, KÖMMERLING has developed a special product range for this innovative technology. Our Ködiglaze adhesives are characterised by very good weathering performance and temperature resistance as well as by an optimal relation between stability and flow behaviour. They also offer excellent creep resistance and are, of course, compatible with our insulating glass sealants.

Specific Product Properties

Ködiglaze P

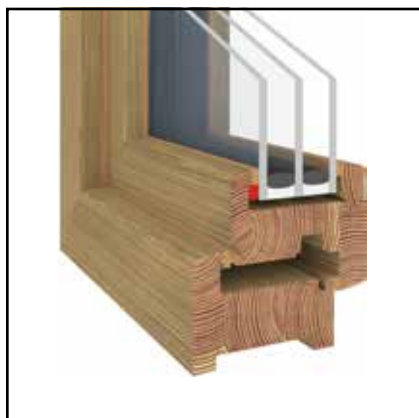
1- and 2-component polyurethane adhesive

- ✚ Formulation and properties adapted to insulating glass secondary sealants
- ✚ Can be processed either as 1- or 2-component system

Ködiglaze SDG

1- and 2-component silicone adhesive

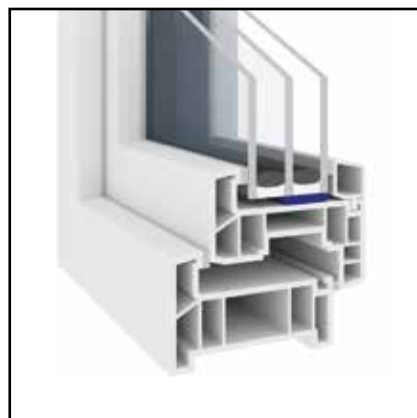
- ✚ Optimum pot life / curing ratio
- ✚ High stability and elasticity
- ✚ Can be processed either as 1- or 2-component system



Example: Overlap Bonding



Example: Glass Edge Bonding



Example: Rebate Bonding

System Combinations

Frame Material	Bonding Positions		
	Glass Edge	Overlap	Rebate
PVC	Ködiglaze SDG	Ködiglaze SDG	Ködiglaze P
Wood	Ködiglaze SDG	Ködiglaze SDG	Ködiglaze P
Wood + Aluminium	–	Ködiglaze SDG	Ködiglaze P
Aluminium	Ködiglaze SDG	Ködiglaze SDG	Ködiglaze P

Please contact our project team to get advice for your individual combination.



ANTI-INTRUDER GLAZING

ON THE SAFE SIDE WITH KÖMMERLING

In addition to energy efficiency, security is an important issue when it comes to windows and doors. A break-in is a major intrusion into a person's private life. The feeling of being undisturbed and free in one's familiar home suffers greatly after a break-in. A large number of break-ins into flats and houses occur via the windows. This is why it is absolutely crucial to choose anti-intruder windows when building a new house or modernising an old one.

When it comes to anti-intruder glazing, you can count on our products for RC-2 and RC-3 bonding, which are optimally adapted to insulating glass sealants (RC = resistance class).

Specific Product Properties

Ködiglaze P

1-component polyurethane adhesive

- ✚ Test certificate available
- ✚ Formulation and properties specially adapted to insulating glass secondary sealants
- ✚ Available in 600 ml sachets

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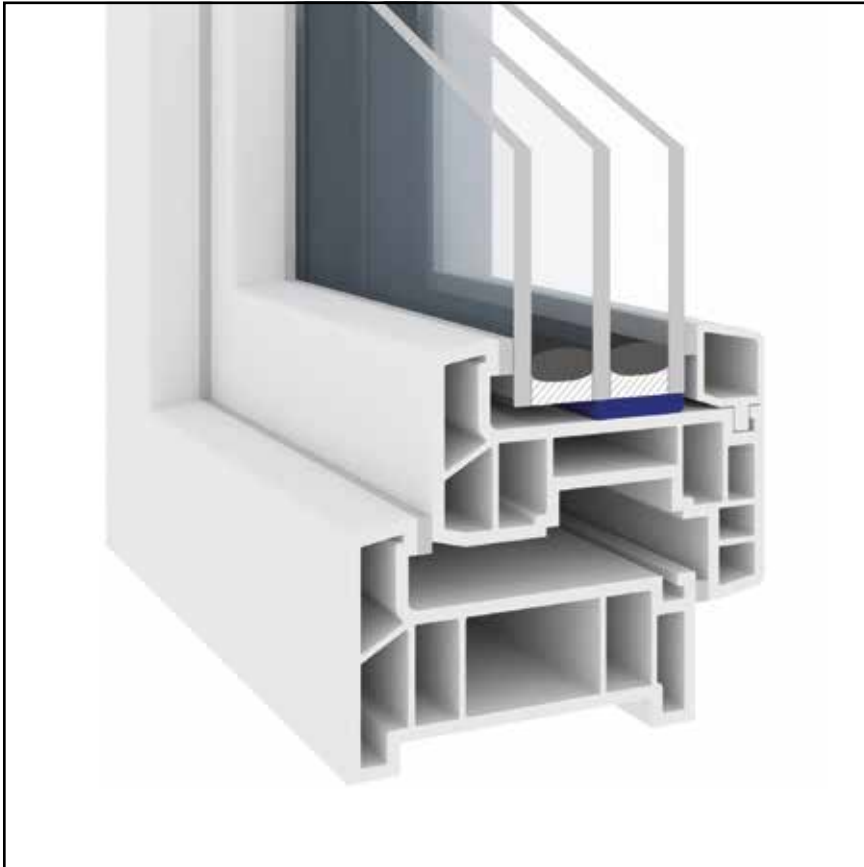
2-component polysulfide sealant

- ✚ Very good adhesion to glass and metal surfaces
- ✚ Available in 345 ml mixing cartridges



KÖDIGLAZE P

Ködiglaze P is a polyurethane adhesive developed especially for the bonding of insulating glass units into window sashes. Due to its formulation, which is adapted to insulating glass sealants, and its mechanical properties, Ködiglaze P is suited optimally for application in rebate bonding. Ködiglaze P can be applied as either a one-component or a two-component system. Ködiglaze P is especially suitable for use as bonding material for the production of anti-intruder windows and doors compliant with resistance classes RC-2 and RC-3.



Specific Product Properties

- ✚ Formulation and properties specially adapted to secondary sealants
- ✚ Very good weathering and temperature resistance
- ✚ Optimum relation between stability and flow behaviour
- ✚ Excellent creep resistance

Packaging Units

Ködiglaze P

- Component A: 230 kg drum
- Component B: 25,6 kg hobcock

Processing

In two-component processing, the adhesive is mixed by means of mixing and dosing equipment and is applied either manually or automatically.

Processing as a one-component adhesive is also possible (see page 5 "Anti-Intruder Glazing").



Technical Data

	Ködiglaze P	Testing methods
Base	2-component polyurethane adhesive	
Colour	Grey	
Density (mix)	1,19 g/cm ³	DIN 53479
Mix ratio	10 : 1 by volume 10 : 1,15 by weight	
Pot life	20 min	at +23 °C
Hardness Shore A	48	DIN 53505/ISO 868
Tensile strength	2,0 N/mm ²	DIN 53504/ISO 527
Elongation at break	450 %	DIN 53504/ISO 527
Tear resistance	9 N/mm	DIN 53515/ISO 34

Please note: The data provided above is only intended as general information. The properties and performance characteristics listed are approximate values; they are not part of the product specification. As processing and application conditions are beyond our influence and control, and due to the multitude of different materials, we recommend that you always perform sufficiently thorough tests of your own. No liability for concrete application results can therefore be derived from the data and information provided in the table above. As part of our sales terms and conditions, we only provide a warranty for the consistently high quality of our products.

KÖDIGLAZE SDG

The Ködiglaze SDG range consists of silicone adhesives developed specifically for the bonding of insulating glass units into window sashes. Their processing and curing parameters are optimally adapted to automatic processing.



Specific Product Properties

- ✚ Optimized pot life/curing ratio
- ✚ Optimum relation between stability and flow behaviour
- ✚ Very good UV, weathering and temperature resistance
- ✚ High strength and elasticity
- ✚ Very good creep resistance

Processing

Ködiglaze SDG is applied with an automated adhesive dispensing unit. With Ködiglaze SDG 1C, a 1-component silicone adhesive is also available for prototype manufacturing and repairs (further information upon request).

Packaging Units

Ködiglaze SDG 10

- Component A: 260 kg drum
- Component B: 26 kg hobbock

Ködiglaze SDG 30

- Component A: 260 kg drum
- Component B: 26 kg hobbock
490 ml side-by-side cartridge

Ködiglaze SDG 1C

- 600 ml sachet



Technical Data

	Ködiglaze SDG 10	Ködiglaze SDG 30	Ködiglaze SDG 1C	Testing methods
Base	2-component silicone rubber	2-component silicone rubber	1-component silicone rubber	
Colour	Black	Black	Black	
Density (mix)	1,37 g/cm ³	1,37 g/cm ³	1,39 g/cm ³	DIN 53479
Mix ratio	10 : 1 by weight	10 : 1 by weight	–	
Pot life	10 min	30 min	7 min*	at +23 °C
Handling time	after 30 minutes	after 120 minutes	–	at +23 °C
Hardness Shore A	48	46	40	DIN 53505/ISO 868
Tensile Strength	2,0 N/mm ²	2,1 N/mm ²	1,2 N/mm ²	DIN 53504/ISO 527
Elongation at break	210 %	230 %	180 %	DIN 53504/ISO 527
Tear resistance	7 N/mm	8 N/mm	–	ASTM D 624/ISO 34

* Skin formation time

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COMPLEMENTARY PRODUCTS

GLAZING SILICONE

Ködisil N

1-component silicone sealant

- ✚ For glazing applications, connecting joints and general expansion joints
- ✚ Good weathering, ageing and temperature resistance from -40 °C to +160 °C
- ✚ Neutral curing
- ✚ Antifungal
- ✚ Fulfils the requirements of DIN 18545, part 2, group E
- ✚ Compliant with EN 15651



PRIMERS & CLEANERS

KÖMMERLING primers and cleaners for pre-treatment prior to window bonding are matched optimally to the various types of bonds. Due to the great diversity of frame materials and combinations, consultation with our project team is essential.





KÖMMERLING – YOUR SYSTEMS PARTNER

COMPETENCE AND SERVICE

Durable bonding and thus the functionality of a window depends on the compatibility of all materials that are in contact with each other. To ensure this compatibility, KÖMMERLING offers suitable system solutions consisting of insulating glass sealants and adhesive systems.

Our competent advice on questions regarding product selection, processes and quality assurance constitutes a solid foundation for the safe application of adhesive technology. 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

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



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