



Sika Solutions:

Sikasil® Engineered Silicones
for Façades, Fenestration and
Insulating Glass (FFI)

Product Overview





Sikasil® Silicone Sealants: System Solutions for Glass, Metal and Natural Stone Construction

Structural Glazing with Sikasil®

Sikasil® SG-500 CN and Sikasil® SG-550 -- fast-curing silicone adhesives with unrivalled resistance to UV and weathering -- are ideal for bulk pump applications. Of all the structural glazing adhesives in the market, Sikasil® SG-550 offers the highest design stress values and allows for the smallest joint dimensions.

For on-site structural glazing applications, such as repair glazing or small factory applications, Sika offers Sikasil® SG-18 and Sikasil® SG-20, one-part silicone sealants with high UV- and weathering-resistance. Sikasil® SG-20 features extremely high mechanical strength and excellent bonding capabilities.

To select the best silicone for each project, let us put you in touch with our Sika FFI Competence Centres. They offer individualized project service and support – from planning through to execution.

Sikasil® for Insulating Glass

Sikasil® IG-25 is a two-part silicone sealant developed for bonding multi-pane insulating glass units in curtain-walls. It combines high mechanical strength and good inherent bonding strength with excellent resistance to weathering and UV. With Sikasil® IG-25 HM Plus, the ultra-high-modulus secondary-sealant, production of inert gas-filled IG units with a service life beyond 30 years is made possible.

Sikasil® Weatherseals

For protecting movement joints against the elements, Sika offers Sikasil® WS-290 and Sikasil® WS-305 CN. Both offer exceptional flexibility and excellent adhesion to façade materials. Sikasil® WS-290, additionally, will not stain glass, metals and many types of natural stone.

When excellent bond strength is required in addition to weathering resistance, Sikasil® WS-295 is recommended.



Sika's “Total System” Programme

Sika's system approach to supplying the façades manufacturing industry incorporates a complete line of compatible, architectural-driven products, supported by the tools and technical services required to plan and implement the perfect system for each project. With Sika, you can be confident that the products used to bond your façade system will be compatible with the sealants used to protect it against the elements, and that the aesthetics of your design will be supported by the necessary technical characteristics and wide colour range of our products.

Our Sikasil® silicone sealants, in particular, have been specially developed for use in challenging façade applications involving glass, metal and natural stone. They include Sikasil® SG products for structural glazing, Sikasil® IG for insulating glass units, and Sikasil® WS for weather-sealing. The professional-quality product range is rounded out by compatible Sika accessories, such as spacer tapes, primers, substrate cleaners and pump cleaning products. These products are all designed to work seamlessly together.

Sika Warranty

Sikasil® façade systems come with a warranty... Ask your local technical sales representative for all the details.

Additional Product Information

For information on our Sika® Membran System, SikaGlaze® polyurethanes and SikaTack® Panel System, ask for our **Sika Solutions: For Sealing and Bonding in Façades, Fenestration and Insulating Glass** brochure or browse through our website at: www.sika.ca.

Sikasil® Engineered Silicones: Technical Data

Properties of Sikasil® Silicone Sealants

The following Technical Data reflects typical values. Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

Sikasil®		STRUCTURAL GLAZING			
		SG-18	SG-20	SG-500 CN	SG-550
Description		structural glazing SJ technology ¹⁾	structural glazing SJ technology ¹⁾	structural glazing	high strength structural glazing SJ technology ¹⁾
Curing system		1-part neutral	1-part neutral	2-part neutral	2-part neutral
Joint movement capability [%]	ISO 9047 ASTM C920	±12.5 25	±12.5 50	±12.5 25	±12.5 25
Skin-over time / pot life [min] 23 °C/50% rel. humidity)		30	15	60	50
Hardness, Shore A	ISO 868	44	39	35	55
Modulus at 100% elongation [N/mm ² / psi]	ISO 37, rod S2	1.10 / 160	0.90 / 130	1.00 / 145	1.70 / 247
Tensile strength [N/mm ² / psi]	ISO 37, rod S2	2.00 / 290	2.20 / 320	2.00 / 290	3.40 / 493
Elongation at break [%]	ISO 37, rod S2	300	450	350	300
Tear strength [N/mm]	ISO 34-C	4.0	7.0	4.0	4.5
Admissible tensile strength [N/mm ² / psi] (Design factor)		0.17 / 25	0.17 / 25	0.14 / 20	0.20 / 29
Permanently elastic °C		-40 to +150	-40 to +150	-40 to +150	-40 to +150
Compatible with	metals	yes	yes	yes	yes
	polycarbonate	yes	yes	yes	yes
	polyacrylate	no	yes	no	no
	alkaline substrates	yes	yes	yes	no
Shelf life [months] (when kept below 25 °C)		12	9	12	12
Certificates / Approvals / Standards		EOTA ETAG No. 002 - 2001	EOTA ETAG No. 002 - 2001 ETA/ CE mark	ASTM C920	EOTA ETAG No. 002 - 2001 ETA/ CE mark
		EN 1279-2	EN 13022	ASTM C1184	ASTM C920
		ASTM C920	ASTM C920	GB16776-2005	ASTM C1184
		ASTM C1184	ASTM C1135		EN 13022
			ASTM C1184		
			SNJF-VEC		
			DIN 4102-B1		

¹⁾ Slim Joint technology, product design strength higher than 0.14 N/mm².

INSULATING GLASS		WEATHER-SEALING		
IG-25	IG-25 HM Plus	WS-305 CN	WS-295	WS-290
insulating glass air filled	insulating glass gas filled SJ technology ¹⁾	general-purpose weather-seal	weather-seal non staining (curtain wall)	weather-seal non staining
2-part neutral	2-part neutral	1-part neutral	1-part neutral	1-part neutral
±12.5 25	±12.5 25	±25 ±50	±50	+100 -50
45	40	35	50	50
45	60	15	20	9
1.40 / 203	2.10 / 305	0.40 / 58	0.22 / 32	0.29 / 42
2.30 / 334	2.50 / 363	1.00 / 145	0.55 / 80	–
200	150	900	800	1200
6.0	5.0	4.0	–	–
0.14 / 20	0.19 / 28		–	–
–40 to +150	–40 to +150	–40 to +150	–62 to 177	–62 to 177
yes	yes	yes	yes	yes
no	no	no	no	no
no	no	no	no	no
yes	yes	yes	yes	yes
12	12	12	12	12
EOTA ETAG No. 002 - 2001 ETA/ CE mark	EOTA ETAG No. 002 - 2001 ETA/ CE mark	ASTM C-920		
EN 1279-2, -4	EN 1279-2, -3, -4	TT-S-001543 A	ASTM C-920	ASTM C-920
EN 15434	CEKAL	TT-S-00230 C	TT-S-00230 C	TT-S-00230 C
CEKAL	SNJF VI-VEC		AMMA 802.3	TT-S-001543 A
SNJF VI-VEC			AMMA 803.3	AMMA 803.3
GB16776 - 2005			AMMA 805.2	SWRI
ASTM E2188			AMMA 808.3	
ASTM E2189			SWRI	
ASTM E2190				

Sikasil® Silicones: Colours

	Sikasil®	SG-18	SG-20	SG-500 CN*	SG-550	IG-25 IG-25 HM Plus	WS-305 CN	WS-295	WS-290
Transparent							■**		
White			■	■**			■	■	■
Colonial White						■	■	■	
Beige							■**		
Aluminum							■	■	■
Grey S1									
Grey S6		■	■	■		■	■	■**	
Black		■	■	■	■	■	■	■	■
Bronze							■	■	■
Medium Bronze							■	■	■

Sika assumes no liability for adhesion and gloss based on this overview, since the printed colours may differ from the colours of the actual silicone sealant. For product samples, contact your local technical sales representative.

*DN

** Colour available by special order.

Sikasil® Engineered Silicones: Packaging Units

Sikasil®	SG-18	SG-20	SG-500 CN*	SG-550	IG-25 IG-25 HM Plus	WS-305 CN	WS-295	WS-290
Cartridge	■	■				■	■	■
Sausage	■	■				■	■	■
Pail	■	■				■		
Drum		■				■		
Kit (drum+pail)			■	■	■			

Sikasil® Accessory Products: Packaging Units

	Sika® Cleaner G&M	Sika® Cleaner P	Sika® Aktivator-205	Sika® Primer-790	Sika® Primer-210	Sika® Mixer Cleaner	Sika® Spacer Tape HD
0.25 litre bottle			■		■		Contact your local technical sales representative.
1 litre bottle	■	■	■	■	■		
25 litre pail						■	
200 litre drum						■	

Sika Worldwide



With the help of approximately 14,000 employees, and subsidiaries in more than 77 countries, Sika supplies the specialty chemicals market world-wide. It is a leader in processing the materials used in sealing, bonding, damping, reinforcing and load-bearing-structures' protection in construction (buildings and infrastructure construction). Sika supplies a complete line of high-quality concrete admixtures, specialty mortars, sealants and adhesives, damping and reinforcing materials, structural strengthening systems, industrial flooring and membranes.

Additionally, it supplies the manufacturing sector with sealing, bonding and damping products for vehicle, ship, building-components, equipment, solar- and wind-power equipment manufacturers.

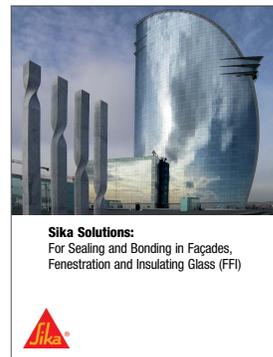
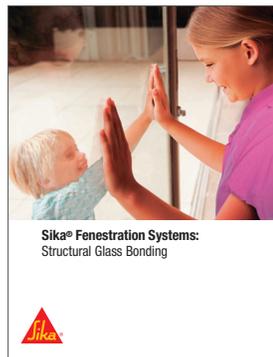
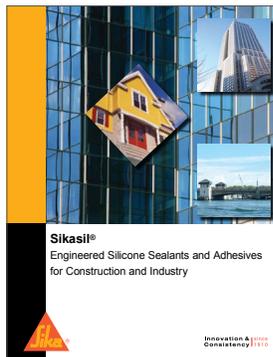
Sika North America Plant Locations

Montreal, Quebec
Edmonton, Alberta
Lyndhurst, New Jersey
Lakewood, New Jersey
Marion, Ohio
Grandview, Missouri

North American Silicone Competence Centre

995 Towbin Avenue
Lakewood, NJ 08701

Also available:



The information and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions, within their shelf life. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any recommendations, or from any other advice offered. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users should always refer to the most recent issue of the Product Data Sheet for the product concerned, copies of which will be supplied on request or can be accessed in the Internet under www.sika.ca.

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