



Sika FFI

Sikasil[®] Product Overview

Engineering Silicones for Facades



Innovation & Consistency | since 1910



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

Structural Glazing with Sikasil®

For on-site structural glazing applications, e.g. repair glazing, or small jobs of factory application, Sika offers the one-part silicone sealants Sikasil® SG-18 and Sikasil® SG-20 with high UV and weathering resistance. Sikasil® SG-20 is additionally characterized by extremely high mechanical strength and excellent bonding. Sikasil® SG-500, Sikasil® SG-500 CN and Sikasil® SG-550 are preferred for machine application; they are fast-curing silicone sealants with unrivalled resistance to UV and weathering. Of all SG adhesives in the market Sikasil® SG-550 has the highest design stress and allows smallest joint dimensions. The easiest way to find the best silicone sealant for your application is to take advantage of the technical service offered by the Sika FFI Competence Centres.

Sikasil® for Insulating Glass

Sikasil® IG-25 is a two-part silicone sealant developed for bonding multipane insulating glass units in curtain walls. It combines high mechanical strength and good inherent bonding strength with excellent resistance to weathering and UV. With the ultrahigh modulus secondary sealant Sikasil® IG-25 HM Plus it is even possible to produce IG units with inert-gas filling with a service life of more than 30 years.


Sikasil® Weatherseals

Sika offers a new sealant for protecting movement joints against the elements: Sikasil® WS-605 S with exceptional flexibility and excellent adhesion to facade materials and even non-staining properties to glass, metals and some types of natural stone.

Another tried-and-tested weatherseal product is Sikasil® WS-305 CN, which ensures excellent bond strength and weathering resistance.

Sikasil® WS-355 is formulated to meet the specific requirements of natural stone facades. This ready-to-use sealant does not stain the edges of natural stone joints and is not corrosive to metals. All products are available in a large range of colours. We can also supply nonstandard colours on request. Please take into account the special conditions when ordering non-standard colours.





Complete System Program

Sikasil® silicone sealants have been specially developed for challenging applications on glass, metal and natural stone facades. They include Sikasil® SG products for structural glazing, Sikasil® IG for insulating glass units and Sikasil® WS for weatherseals. The professional product range is rounded off with compatible Sika® accessories: spacer tapes, primers, substrate cleaners and machine cleaners. All the products are perfectly matched to one another.

This product overview will help you find the ideal technical solution and a perfect colour match for your facade construction needs. Please also make use of our product service. We can ensure that all the products you use for the facade are compatible with our sealants. If you need a warranty for your project, we would be pleased to provide one after examining the details of laboratory tests in our FFI Competence Centres.

For further compatible products for facades, e.g. Sika® Membrane System or SikaTack® Panel System, please consult our brochure «Solutions for Sealing and Bonding in Facades» or browse through our website www.sika.com/SES.

Sikasil® for Fire Protection

Sikasil® FS-665 is a fire protection sealant designed for sealing, bonding and repair applications in the construction sector. This flame-retarding sealant can also be used on alkaline substrates such as concrete and mortar, and is therefore suitable for expansion joints that have to satisfy stringent flame-retardant requirements. Sikasil® FS-665 is characterized by fire resistance for a very long duration. For horizontal floor joints the self-levelling Sikasil® FS-665 SL is also available.

Sikasil® for Glazing Applications

Sikasil® GS-621 is the right solution when high mechanical strength is required in total vision glazing (TVG) and other high-performance glazing applications.

Sikasil® Engineering Silicones: Technical Data

Characteristic Properties of Sikasil® Silicone Sealants


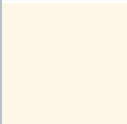
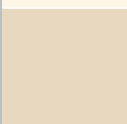
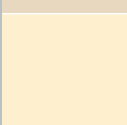






Sikasil®		SG-18	SG-20	SG-500	SG-500 CN	SG-550
Description		structural glazing SJ technology ¹⁾	structural glazing SJ technology ¹⁾	structural glazing	structural glazing	high strength structural glazing SJ technology ¹⁾
Curing system		1-part neutral	1-part neutral	2-part neutral	2-part neutral	2-part neutral
Joint movement capability [%]	ISO 9047 ASTM C920	±12.5 25	±12.5 50	±12.5 25	±12.5 25	±12.5 25
Skin-over time / pot life [min] 23 °C/50% rel. humidity)		30	15	50	60	50
Hardness, Shore A	ISO 868	44	39	45	35	55
Modulus at 100% elongation [N/mm ² / psi]	ISO 37, rod S2	1.10 / 160	0.90 / 130	1.10 / 160	1.00 / 145	1.70 / 247
Tensile strength [N/mm ² / psi]	ISO 37, rod S2	2.00 / 290	2.20 / 320	2.20 / 320	2.00 / 290	3.40 / 493
Elongation at break [%]	ISO 37, rod S2	300	450	300	350	300
Tear strength [N/mm]	ISO 34-C	4.0	7.0	6.0	4.0	4.5
Admissible tensile strength [N/mm ² / psi] (Design factor)		0.17 / 25	0.17 / 25	0.14 / 20	0.14 / 20	0.20 / 29
Permanently elastic [°C]		-40 to +150	-40 to +150	-40 to +150	-40 to +150	-40 to +150
Compatible with	metals	yes	yes	yes	yes	yes
	polycarbonate	yes	yes	yes	yes	yes
	polyacrylate	no	yes	no	no	no
	alkaline substrates	yes	yes	yes	yes	no
Shelf life [months] (when kept below 25 °C)		12	9	12	12	12
Certificates / Approvals / Standards		EOTA ETAG No. 002 - 2001	EOTA ETAG No. 002 - 2001 ETA/ CE mark	EOTA ETAG No. 002 - 2001 ETA/ CE mark	ASTM C920	EOTA ETAG No. 002 - 2001 ETA/ CE mark
		EN 1279-2	EN 13022	EN 13022	ASTM C1184	ASTM C920
		ASTM C920	ASTM C920	ASTM C1184	GB16776-2005	ASTM C1184
		ASTM C1184	ASTM C1135	SNJF-VEC		EN 13022
			ASTM C1184	SNJF VI-VEC		
			SNJF-VEC	DIN 4102-B1		
			DIN 4102-B1			

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

2) for characteristic values of transparent WS-305 CN and WS-605 S see product datasheet

GS-621	IG-25	IG-25 HM Plus	WS-305 CN	WS-355	WS-605 S	FS-665	FS-665 SL
glazing TVG aquarium	insulating glass air-filled	insulating glass gas-filled SJ technology ¹⁾	curtain wall weatherseal ²⁾	weatherseal non-staining to stones	curtain wall weatherseal ²⁾ non-streaking to glass/metal	fire- protection	fire- protection self-levelling
1-part acidic	2-part neutral	2-part neutral	1-part neutral	1-part neutral	1-part neutral	1-part neutral	1-part neutral
±20 ±25	±12.5 25	±12.5 25	±25 ±50	±25 ±50	±25 ±50	±25 ±25	±25 +100 / -50
10	45	40	35	20	25	15	50
22	45	60	15	22	20	25	15
0.60 / 87	1.40 / 203	2.10 / 305	0.40 / 58	0.30 / 43	0.30 / 43	0.40 / 58	0.20 / 26
1.60 / 232	2.30 / 334	2.50 / 363	1.00 / 145	1.00 / 145	1.00 / 145	1.20 / 174	0.60 / 87
450	200	150	900	800	800	700	600
4.7	6.0	5.0	4.0	4.0	4.0	4.0	4.0
	0.14 / 20	0.19 / 28					
-40 to +180	-40 to +150	-40 to +150	-40 to +150	-40 to +150	-40 to +150	-40 to +150	-40 to +150
no	yes	yes	yes	yes	yes	yes	yes
yes	no	no	no	no	no	yes	yes
no	no	no	no	no	no	no	no
no	yes	yes	yes	yes	yes	yes	yes
16	12	12	12	12	12	12	12
ISO 11600 G20 LM	EOTA ETAG No. 002 - 2001 ETA/ CE mark	EOTA ETAG No. 002 - 2001 ETA/ CE mark	ASTM C920	ASTM C1248	ISO 11600 F-G 25 LM	ISO 11600 F 25 LM	ISO 11600 F 25 LM
ASTM C920	EN 1279-2, -4	EN 1279-2, -3, -4	TT-S-001543 A	ASTM C920	ASTM C1248	DIN 4102-B1	DIN 4102-B1
TT-S-001543 A	EN 15434	CEKAL	TT-S-00230 C	TT-S-001543 A	ASTM C920	BS 476 part 20	BS 476 part 20
TT-S-00230 C	CEKAL	SNJF VI-VEC		TT-S-00230 C	TT-S-001543 A	ASTM C920	ASTM C920
	SNJF VI-VEC				TT-S-00230 C	TT-S-001543 A	TT-S-001543 A
	GB16776 - 2005				DIN 18540	TT-S-00230 C	TT-S-00230 C
					DIN 18545	EN 11925-2	
						UL2079	

Sikasil® Engineering Silicones: Colours

	Sikasil®	SG-18	SG-20	SG-500 SG-500 CN	SG-550	GS-621	IG-25 IG-25 HM Plus	WS-305 CN	WS-355	WS-605 S	FS-665	FS-665 SL
Transparent						■		■		■		
White			■					■		■		
Beige								■	■	■		
Ivory										■		
Grey S1								■		■	■	
Grey S3								■	■	■		
Grey S4								■		■		
Grey S6		■	■	■			■	■		■		
Black		■	■	■	■	■	■	■	■	■	■	■
Bronze										■		

We don't accept liability for adhesion and gloss based on this overview, since the printed colours may differ from the colours of the original silicone sealant. You can obtain suitable samples on request from your regional sales manager.

Sikasil® Engineering Silicones: Packaging Units

Sikasil®	SG-18	SG-20	SG-500 SG-500 CN	SG-550	GS-621	IG-25 IG-25 HM Plus	WS-305 CN	WS-355	WS-605 S	FS-665	FS-665 SL
Cartridge	■	■	■		■		■	■	■		
Foilpack	■	■			■		■	■	■	■	
Pail	■	■									■
Drum		■							■		
Kit (drum+pail)			■	■		■					
Dual cartridge			■								

Sikasil® Accessory Products: Packaging Units

	Sika® Cleaner G&M	Sika® Cleaner P	Sika® Aktivator-205 (Cleaner-205)	Sika® Primer-790	Sika® Primer-210	Sika® Mixer Cleaner	Sika® Spacer Tape HD
0.25 litre bottle			■		■		Information about dimensions can be obtained from your sales manager.
1 litre bottle	■	■	■	■	■		
5 litre can	■	■	■	■			
25 litre pail						■	
200 litre drum						■	

Sika Worldwide



Sika is a globally active company supplying the specialty chemicals markets. It is a leader in processing materials used in sealing, bonding, damping, reinforcing and protecting load-bearing structures in construction (buildings and infrastructure construction) and in industry (vehicle, building component and equipment production).

Sika's product lines feature high-quality concrete admixtures, specialty mortars, sealants and adhesives, damping and reinforcing materials, structural strengthening systems, industrial flooring and membranes. Subsidiaries in more than 74 countries worldwide and approximately 13,500 employees link customers directly to Sika.

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Our most current General Sales Conditions shall apply. Please consult the most current local Product Data Sheet prior to any use.

www.sika.com/ses



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