

Sika® Facade Systems

Sikasil® Product Overview Engineering Silicones for Facades

Sika – Your Local Partner with a Global Presence

Sika is a globally active company in the speciality and construction chemicals business. It has subsidiary manufacturing, sales and technical support facilities in over 70 countries around the world.

Sika is THE global market and technology leader in waterproofing, sealing, bonding, dampening, strengthening and protection of buildings and civil engineering structures.

Sika has approx. 12 000 employees worldwide and is therefore ideally positioned to support the success of its customers.



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



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Industry



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Front cover: Facade by Yuanda, Photo by: W. Wagner
Page 2, 3: Facade by Josef Gartner GmbH, Photo by: Gardin & Mazzoli



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 Facade 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.

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 is preferred for machine application; it is a fast-curing silicone sealant with unrivalled resistance to UV and weathering. The easiest way to find the best silicone sealant for your application is to take advantage of the technical service offered by the Sika Facade 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 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, 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 non-standard colours on request. Please take into account the special conditions when ordering non-standard colours.

Sikasil® for Fire Protection

Sika® 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. Sika® FS-665 is characterized by fire resistance for a very long duration. For horizontal floor joints the self-levelling Sika® 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 | GS-621 | IG-25 | IG-25 HM | WS-305 | WS-355 | WS-605 S | FS-665 | FS-665 SL |
|--|--|--|--|---|--|--|---|---|---|--|--|
| Description | structural glazing | structural glazing SJ technology ¹⁾ | structural glazing | glazing TVG | insulating glass air-filled | insulating glass inert-gas-filled | curtain wall weatherseal | weatherseal non-staining to stones | curtain wall weatherseal ²⁾ non-staining to glass/metal | fire protection | fire protection self-levelling |
| Curing system | 1-part neutral | 1-part neutral | 2-part neutral | 1-part acidic | 2-part neutral | 2-part neutral | 1-part neutral | 1-part neutral | 1-part neutral | 1-part neutral | 1-part neutral |
| Joint movement capability [%] ISO 9047 ASTM C920 | ±12.5 25 | ±12.5 50 | ±12.5 25 | ±20 ±25 | ±12.5 25 | ±12.5 25 | ±25 ±50 | ±25 ±50 | ±25 ±50 | ±25 ±25 | ±25 +100 / - 50 |
| Skin-over time / pot life [min] (23 °C/50 % rel. humidity) | 30 | 15 | 60 | 10 | 35 | 110 | 20 | 20 | 25 | 15 | 45 |
| Hardness, Shore A ISO 868 | 44 | 39 | 45 | 22 | 45 | 60 | 20 | 20 | 20 | 25 | 15 |
| Modulus at 100 % elongation [N/mm ² / psi] ISO 37, rod S2 | 1.1 / 159 | 0.90 / 130 | 1.10 | 0.60 / 87 | 1.40 / 200 | 1.70 / 247 | 0.40 / 58 | 0.30 / 43 | 0.30 / 43 | 0.40 / 58 | 0.20 / 26 |
| Tensile strength [N/mm ² / psi] ISO 37, rod S2 | 1.80 / 260 | 2.20 / 320 | 2.20 / 320 | 1.60 / 232 | 2.30 / 334 | 2.30 / 334 | 0.90 / 130 | 1.00 / 145 | 1.00 / 145 | 1.20 / 174 | 0.70 / 101 |
| Elongation at break [%] ISO 37, rod S2 | 350 | 450 | 300 | 450 | 200 | 150 | 700 | 800 | 800 | 700 | 750 |
| Tear strength [N/mm] ISO 34-C | 6.0 | 7.0 | 6.0 | 5.0 | 6.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 | 3.0 |
| Admissible tensile strength [N/mm ² / psi] (Design factor) | 0.17 / 25 | 0.17 / 25 | 0.14 / 20 | | 0.14 / 20 | 0.14 / 20 | | | | | |
| Permanently elastic [°C] | -40 to +150 | -40 to +150 | -40 to +150 | -40 to +180 | -40 to +150 | -40 to +150 | -40 to +150 | -40 to +150 | -40 to +150 | -40 to +150 | -40 to +150 |
| Compatible with metals | yes | yes | yes | no | yes | yes | yes | yes | yes | yes | yes |
| polycarbonate | no | yes | yes | yes | yes | no | no | no | yes | yes | yes |
| polyacrylate | no | yes | no | no | no | no | no | no | no | no | no |
| alkaline substrates | yes | yes | yes | no | yes | yes | yes | yes | yes | yes | yes |
| Shelf life [months] (when kept below 25 °C) | 12 | 9 | 12 | 18 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Certificates / Approvals / Standards | EOTA ETAG No. 002 - 2001 EN 13022 ASTM C1135 ASTM C1184 | EOTA ETAG No. 002 - 2001 ETA/CE mark EN 13022 ASTM C1135 ASTM C1184 SNJF-VEC EN 11925-2 DIN 4102-B1 | EOTA ETAG No. 002 - 2001 ETA/CE mark EN 13022 ASTM C1135 ASTM C1184 SNJF-VEC EN 11925-2 SNJF VI-VEC DIN 4102-B1 DIN 4102-B1 GB16776-2005 | ISO 11600 G 20 LM ASTM C920 TT-S-001543 A TT-S-00230 C | EOTA ETAG No. 002 - 2001 ETA/CE mark EN 1279-2, -4 EN 15434 CEKAL SNJF VI-VEC GB16776 - 2005 | EOTA ETAG No. 002 - 2001 ETA/CE mark EN 1279-2, -3, -4 CEKAL SNJF VI-VEC | ISO 11600 F-G 25 LM ASTM C920 TT-S-001543 A TT-S-00230 C DIN 18540 AENOR | ISO 11600 F-G 25 LM ASTM C1248 ASTM C920 TT-S-001543 A TT-S-00230 C | ISO 11600 F-G 25 LM ASTM C1248 ASTM C920 TT-S-001543 A TT-S-00230 C DIN 18540 DIN 18545 | ISO 11600 F-G 25 LM EN 11925-2 DIN 4102-B1 BS 476 part 20 ASTM C920 TT-S-001543 A TT-S-00230 C | ISO 11600 F-G 25 LM EN 11925-2 DIN 4102-B1 BS 476 part 20 ASTM C920 TT-S-001543 A TT-S-00230 C |

1) Slim Joint technology

2) for characteristic properties of transparent SIKASIL® WS-605 S see Product Data Sheet

Sikasil® Engineering Silicones: Colours

| | Sikasil® | SG-18 | SG-20 | SG-500 | GS-621 | IG-25 | IG-25 HM | WS-305 | WS-355 | WS-605 S | FS-665 | FS-665 SL |
|-------------|----------|-------|-------|--------|--------|-------|----------|--------|--------|----------|--------|-----------|
| Transparent | | | | | ■ | | | ■ | | ■ | | |
| White S2 | | | | | | | | ■ | | ■ | | |
| Beige S1 | | | | | | | | ■ | ■ | ■ | | |
| Ivory O2 | | | | | | | | | | ■ | | |
| Grey S1 | | | | | | | | ■ | | ■ | ■ | ■ |
| Grey S3 | | | | | | | | ■ | ■ | ■ | | |
| Grey S4 | | | | | | | | ■ | | ■ | | |
| Grey S6 | | | ■ | ■ | | ■ | | | | ■ | | |
| Black S1 | | | | | ■ | | | | | | | |
| Black O1 | | ■ | ■ | ■ | | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Bronze S2 | | | | | | | | | | ■ | | |

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 | GS-621 | IG-25 | IG-25 HM | WS-305 | WS-355 | WS-605 S | FS-665 | FS-665 SL |
|-------------------|-------|-------|--------|--------|-------|----------|--------|--------|----------|--------|-----------|
| Cartridge | ■ | ■ | ■ | ■ | | | ■ | ■ | ■ | ■ | ■ |
| Foilpack | ■ | ■ | | ■ | | | ■ | ■ | ■ | ■ | |
| Pail | ■ | ■ | | | | | | | | | ■ |
| Drum | ■ | ■ | | | | | | | ■ | | |
| Kit (drum + pail) | | | ■ | | ■ | ■ | | | | | |

Sika® Accessory Products: Packaging Units

| | Sika® Cleaner G&M | Sika® Cleaner P | Sika® Cleaner-205 | Sika® Primer-783 | Sika® Primer-790 | 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 | | | | | | ■ | |