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European Technical Assessment Body  
for construction products



## European Technical Assessment

ETA-03/0038  
of 27 November 2025

English translation prepared by DIBt - Original version in German language

### General Part

Technical Assessment Body issuing the European Technical Assessment:

Deutsches Institut für Bautechnik

Trade name of the construction product

Sikasil® SG-500

Product family  
to which the construction product belongs

Sealant to be used in structural sealant glazing kits

Manufacturer

Sika Services AG  
Tüffenwies 16-22  
8048 ZÜRICH  
SWITZERLAND

Manufacturing plant

Sika Polyurethan Manufacturing S.R.L.  
Via L. Einaudi 6  
20068 Peschiera Borromeo (MI)  
ITALY

Sika Polyurethan Manufacturing S.R.L.  
Via Crosa 23/31  
28065 Cerano (NO)  
ITALY

This European Technical Assessment contains

11 pages including 2 annexes which form an integral part of this assessment

This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of

EAD 090010-00-0404

This version replaces

ETA-03/0038 issued on 16 March 2014

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## Specific Part

### 1 Technical description of the product

The structural sealant Sikasil® SG-500 is a two-component silicone-based sealant to be used in structural sealant glazing kits (SSGK) for use as facades and roofs, or parts of them. The structural sealant is only one component of the structural sealant glazing kit. The kit as such is not covered by this European Technical Assessment (ETA).

### 2 Specification of the intended use in accordance with the applicable European assessment Document

The structural sealant Sikasil® SG-500 is to be used in structural sealant glazing kits within the scope of European Assessment Document (EAD Nr. 090010-00-0404<sup>1</sup>) to bond glazing products on support frames made of anodised aluminium or stainless steel. Uncoated glass, glass with an inorganic coating and enamelled glass are applicable as glazing products. The feasible adhesion surfaces of the frames as well as of the glass products are listed in Annex 1 and specified in the test reports deposited at Deutsches Institut für Bautechnik.

The fitness for use of systems (or kits), in which the structural sealant is used, will have to be verified separately in particular by means of a complementary kit ETA based on EAD Nr. 090010-00-0404.

The sealant Sikasil® SG-500 may be used in structural sealant glazing systems of any of the following four types referred to in EAD Nr. 090010-00-0404 and shown in Figure 1. Whether devices to reduce danger in the event of bond failure are required or not depends on local national regulations.

Type I: Mechanical transfer of the dead load of the infill to the sealant-support frame and from there to the structure. The structural seal transfers all other actions. Devices are used to reduce danger in the event of a bond failure.

Type II: Mechanical transfer of the dead load of the infill to the sealant-support frame and from there to the structure. The structural seal transfers all other actions and no devices are used to reduce danger in the event of bond failure.

Type III: The structural seal transfers all actions including the dead load of the infill to the sealant support frame and from there to the structure. Devices are used to reduce danger in the event of a bond failure.

Type IV: The structural seal transfers all actions, including the dead load of the infill to the sealant-support frame and from there to the structure. No devices are used to reduce danger in the event of bond failure.

<sup>1</sup> EAD Nr. 090010-00-04042018-09 Bonded glazing kits and bonding sealants

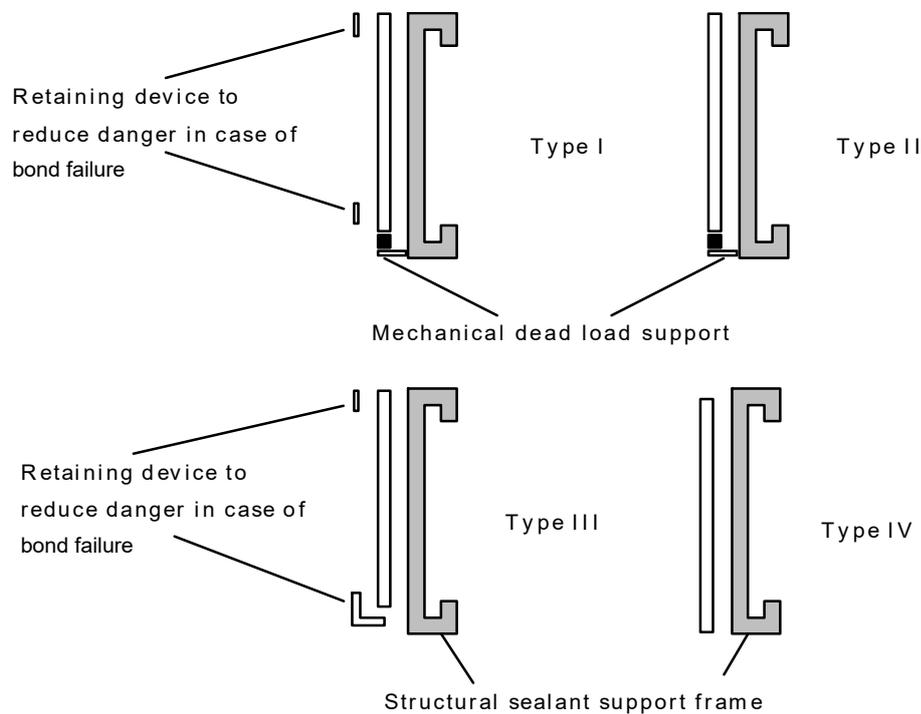


Figure 1 - Schematic examples of the different types of SSGK

The performances given in Section 3 are only valid if the structural sealant Sikasil® SG-500 is used in compliance with the specifications and conditions given in Section 3 and Annex 1.

The verifications and assessment methods on which this European Technical Assessment is based lead the assumption of working life of the structural sealant Sikasil® SG-500 of 25 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

### 3 Performance of the product and references to the methods used for its assessment

#### 3.1 Safety in case of fire (BWR 2)

Essential characteristic	Assessment method	Performance
Reaction to fire	EAD, 2.2.2	NPA*

\* No performance assessed

The resistance to fire shall be assessed within the framework of the European Technical Assessment for the kit.

#### 3.2 Hygiene, health and the environment (BWR 3)

Essential characteristic	Assessment method	Performance
Contents and/or release of dangerous substances	EAD, 2.2.7	The chemical composition of the structural sealant has to be in compliance with the composition deposited at the Technical Assessment Body (DIBt).

Within the scope of this European Technical Assessment there may be other requirements applicable to the product (e.g. due to national laws, regulations and administrative provisions). These requirements need also to be complied with if applicable.

### 3.3 Safety and accessibility (BWR 4)

#### 3.3.1 Essential characteristics

Essential characteristic	Assessment method	Performance	
Mechanical properties of the adhesive bond			
Characteristic stress at rupture – tension	EAD, 2.2.14.3.2	$R_{u,5}$	0.84 MPa
Characteristic stress at rupture – dynamic shear	EAD, 2.2.14.3.3	$R_{u,5}$	0.63 MPa
Physical properties of the adhesive bond	EAD, 2.2.15		
Modulus of elasticity in tension or compression tangential to the origin	EAD, 2.2.15.1.5	$E_o$	1.5 MPa
Façade cleaning agent (Cleaning agent “Pril” as 1% dilution in water)	EAD 2.2.15.1.6	$X_{\text{mean Clean}}$	0.84 MPa
Effects of materials in contact Spacertape Norton, V2100	EAD 2.2.15.1.7	$R_{u,5 \text{ contact}}$	1.05 MPa No discoloration
Resistance to tearing	EAD 2.2.15.1.8.3		Category A

- Working time (at 23 °C, 50 % R.H.): 20 minutes
- Tack-free time (at 23 °C, 50 % R.H.): 120 to 240 minutes
- Time before transport of the bonded frame: 7 days\*

\* An earlier transportation on work site is possible if the following two conditions are respected: Checks during the production (see 3.4.1.2.2.1 of EAD Nr. 090010-00-0404<sup>1</sup> and if the tested H-samples give the following result: Rupture 100 % cohesive and breaking stress  $\geq 0.7$  MPa.

#### Structural sealant – identification characteristics

- Specific mass (mixed at 13/1 ratio):  $V_{\text{mean}} = 1.36 \pm 0.025 \text{ g/cm}^3$
- Hardness Shore A: Mean of 39 (minimum of 34)
- Thermogravimetric analysis: Curve kept in the technical file of the European Technical Assessment
- Thermal conductivity: 0.35 W/(mK)
- Colour Black: colour

This European Technical Assessment is issued for the structural sealant Sikasil® SG-500 on the basis of agreed data/information, deposited with the DIBt, which identifies the product that has been assessed and judged. Changes to the product/production process, which could result in the deposited data/information being incorrect, should be notified to the DIBt before the changes are introduced. The DIBt will decide whether or not such changes affect the European Technical Assessment and consequently the validity of the CE-marking on the basis of the European Technical Assessment and if so whether further assessment/alterations of the European Technical Assessment shall be necessary.

### 3.3.2 Requirements for adhesion surfaces and materials in contact

The characteristic values according section 3.3.1 apply, provided that the adhesion surfaces for the structural bond are in accordance with EAD Nr. 090010-00-0404. The following specifications as well as Annex 1 shall be respected.

### 3.3.3 Enamelled glass as adhesion surface

The coloured pigment made of mineral material may not exceed 25 Mol-% before ceramic penetration.

The surface property after penetration should meet the following conditions and for this an inspection certificate 3.1 according EN 10204<sup>2</sup> is required from the glass producer:

- Minimal scratch hardness according to EN ISO 1518-1<sup>3</sup>: 16 N
- Porosity according to ASTM C 1048<sup>4</sup>: no porosity
- Minimal gloss level according to DIN 67530<sup>5</sup> measuring a recess of 60:20

### 3.3.4 Anodised aluminium as adhesion surface

In Annex 1 manufacturers and their procedures for anodisation are listed. In the context of issuing this European Technical Assessment these kind of anodised surfaces had been assessed. The alloys of aluminium for these types of application are alloys EN AW 6060 state T66 or EN AW 6063 state T66 according to EN 755-2<sup>6</sup>.

### 3.3.5 Stainless steel as adhesion surface

Stainless steel material shall be austenitic alloy. Only the tested surface finish can be actually used in practice. During the process of issuing this European Technical Assessment the stainless steel materials listed in Annex 1 are assessed for bonding with Sikasil<sup>®</sup> SG-500.

### 3.3.6 Adhesion surface preparation

The following products have to be used as pretreatment of the adhesion surfaces:

Cleaning products:	Sika <sup>®</sup> Cleaner G+M
	Sika <sup>®</sup> Cleaner P
Activator:	Sika <sup>®</sup> Aktivator-205
	Sika <sup>®</sup> Aktivator-100
Primer:	Sika <sup>®</sup> Primer-790
	Sika <sup>®</sup> Primer-210

The data sheets of these products are deposited with Deutsches Institut für Bautechnik.

The pretreatment methods for the adhesion surfaces according Annex 1 should be in compliance with the deposited test reports. The structural sealant applier gets this information from Sika AG. During the factory production control the applier of the structural sealant should produce and test specimen with original composition that means including pretreatment of the surfaces according the control plan<sup>7</sup> of the respective European Technical Assessment of the kit.

2	EN 10204:2005-01	Metallic products – Types of inspection documents
3	EN ISO 1518-1:2011-09	Paints and varnishes - Determination of scratch resistance - Part 1: Constant-loading method
4	ASTM C 1048:2012	Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass
5	DIN 67530:1982-01	Reflectometer a as a means for gloss assessment of plane surfaces of paint coatings and plastics
6	EN 755-2:2025	Aluminium and aluminium alloys - Extruded rod/bar, tube and profiles - Part 2: Mechanical properties
7	The control plan is deposited at Deutsches Institut für Bautechnik.	

### 3.3.7 Stepped insulated glass units

For the manufacture of stepped insulating glass units the adhesion surface may be coated – before the actual sealing – with a  $(1.5 \pm 0.5)$  mm thick sealant layer according to the method deposited with Deutsches Institut für Bautechnik. For the coating the structural sealant Sikasil® SG-500 as well as Sikasil® IG-25 of the company SIKA Services AG may be used. Only one of the following combinations (glass face – aluminium face) may be used thereby:

- Sikasil® SG-500 – Sikasil® SG-500
- Sikasil® IG-25 – Sikasil® SG-500

### 3.3.8 Chemical Compatibility of materials in contact

The chemical compatibility is assessed for the following materials in contact with the structural sealant Sikasil® SG-500:

- NORTON spacer V2100 (spacer tape)
- Sika® Spacer Tape HD (spacer tape)
- SikaLastomer® IG-105 and SikaLastomer® IG-106 (Polyisobutylene, inner butyl sealing for insulation glass)

The chemical compatibility of all materials in contact with the structural sealant are to be assessed in the framework of the European Technical Assessment for the kit (system).

### 3.3.9 General aspects

The verification of durability is part of testing the essential characteristics. Durability is only ensured if the specifications of intended use according to Sections 3.3.2 to 3.3.8 and Annex 1 of this ETA are taken into account.

Sika should ensure that the essential information concerning the structural sealant Sikasil® SG-500 is circulated to the applicator of the structural sealant.

The structural sealant Sikasil® SG-500 is fabricated in the manufacturing plant mentioned on page 1.

The maximum storage life of the sealant is given in the data sheet and the labelling.

The structural sealant Sikasil® SG-500 shall be mixed at a ratio base (A) / catalyst (B) by weight of 13/1. It shall be applied between 5 and 35 °C under workshop conditions. The bonding shall be tooled before the snap time has been reached, preferably within 10 minutes after the extrusion. It is important to realise that the snap time can vary in temperature and relative humidity. For consulting the technical service of Sika should be contacted.

After the snap time has been reached, no relative movement shall be induced anymore between the glass and the metal frame.

In all cases it should be checked that there is no condensation on the substrates prior to the sealant application.

Water stagnation in the vicinity of structural seal shall be eliminated constructively.

For facade cleaning it is recommended to use a 1 % (approx.) solution in water of a neutral detergent with pH-value of 7 approximately.

Nevertheless, the assessment of the facade cleaning product shall be done within the framework of the European Technical Assessment (ETA) for the kit in order to check that those cleaning agents do not affect other kit products (gaskets, weather sealant, etc).

The whole kit, respectively the façade system, in which the structural sealant is used, will have to be verified. For this purpose a complementary European Technical Assessment for the kit in accordance with EAD Nr. 090010-00-0404 and an associated control plan are required. In the European Technical Assessment of the kit additional adhesion surfaces to the list in Annex 1 as well as additional components of the kit, such as mechanical devices, should be assessed and the essential controls should be defined.

**4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base**

According to Decision of the Commission 96/582/EC of 24 June 1996 (Official Journal of the European Communities L 254 of 8. October 1996) the system of assessment and verification of constancy of performance (AVCP) (see Annex V and Article 65 Paragraph 2 to Regulation (EU) No 305/2011) given in the following table applies.

Product	Intended use(s)	Level or class	System
Structural sealant glazing kits	Type II and Type IV	-	1
	Type I and Type III	-	2+

System 1 applies due to the reason that the intended use of the structural sealant is not known at the time the sealant is put on the market.

**5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD**

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at Deutsches Institut für Bautechnik.

Issued in Berlin on 27 November 2025 by Deutsches Institut für Bautechnik

Dipl.-Ing. Andreas Kummerow  
Head of Department

*beglaubigt:*  
Schult

## List of suitable substrates for structural adhesion surfaces

### 1 Glass products

Float glass according to EN 572-2

### 2 Glass with inorganic coatings according to ETAG 002-1, Section 5.2.3.3 and according to EN 1096 (class A, B and S)

#### Glas Trösch

Silverstar Sunstop T Silber 20

Silverstar Sunstop T Neutral 50

Silverstar Sunstop T Blau 30

Silverstar Sunstop T Blau 50

#### AGC Glass Europe

Stopsol SS klar

#### Saint-Gobain Glass

COOL-Lite TS 120

COOL-Lite TB 140

COOL-Lite SS 108

COOL-Lite SN 150

COOL-Lite SC 114

#### Guardian Europe

SunGuard® HP Silver 32/26

SunGuard® HP Bronzel 40/27

SunGuard® HP Neutral 60/40

SunGuard® HD Neutral 67

### 3 Enamelled Glass

For the glass matrix (Fritte) the products and the colours of the following manufacturers are suitable.

#### Ferro AG, Frankfurt a. M., Germany

Glass ceramic with glass matrix (Fritte) collection 140 (Group zinc-boron-silicate), all various colours

DELODUR® Desing, 8mm, screen printing Ferro Collection 140 RAL 9005, color no. 144011

DELODUR® Desing, 8mm, screen printing Ferro Collection 140 RAL 9010, color no. 144011

**4 Enamelled glass with inorganic coating**  
**Guardian Europe**

SunGuard® Solar Neutral 67 with ceramic coating collection 140, Ferro AG

SunGuard® Solar Neutral 70 with ceramic coating collection 140, Ferro AG

**5 Anodised aluminium**

Adhesion surfaces which are anodised in one of the following workshops are suitable for bonding with Sikasil® SG-500. The anodising process has to be specified and in conformity with the process deposited with Deutsches Institut für Bautechnik.

**Anodising by Königsdorf Oberflächentechnik GmbH, Wolfhagen, Germany:**

Process Königsdorf-HL1, all colours between E6/CO and E6/C35

**Anodising by HD Wahl GmbH, Jettingen-Scheppach, Germany:**

Process HD-Wahl-HL2, all colours between E6/CO and E6/C35

**Anodising by BWB-Bürox AG, Büren a.A., Switzerland:**

Process BWB-HL3, colour: E6/C0

**Anodising by BWB-Altentrhein AG, Altentrhein, Switzerland:**

Process BWB-HL4, colour: E6/C0

**Anodising by Gerhard Gotta GmbH & Co. KG, Rödermark, Germany:**

Process Gotta-HL5, colour: E6/CO

**Anodising by König Metallveredelung GmbH, Lauchringen, Germany:**

Process König-HL6, all colours between E6/CO and E6/C35

**Anodising by Gartner Extrusion GmbH, Gundelfingen, Germany:**

Process Gartner-HL7, colour: E6/C0

**Anodising by Alural Lummen NV, Lummen, Belgium:**

Process Alural-HL8, E6/C0

**6 Stainless steel**

High-grade steel, material N° 1.4571, ground, grain 180

High-grade steel, material N° 1.4301 2B, silk-mat

High-grade steel, material N° 1.4301 2R, mirror-bright

Sikasil® SG-500

Annex 2

## Indications for reaction to fire and for design calculation

### 1 Reaction to fire

Reaction to fire for Germany: not easily flammable (B1) according DIN 4102.

### 2 Design calculation

The calculation of the structural bond should be in compliance with the additional provisions of the European Technical Assessment of the structural sealant glazing kit according EOTA ETAG 002 Part 1, of which the structural sealant is one part.

For the calculation of the structural bond the total safety factor  $y_{tot} = 6.0$  is recommended and for permanent loads a creep factor of 10. The following values for calculation result from this:

- Design stress in tension:  $\sigma_{des} = 0.14$  MPa
- Design stress in dynamic shear:  $\tau_{des} = 0.105$  MPa
- Design stress in static shear:  $\tau_{\infty} = 0.0105$  MPa