BUILDING TRUST

# Sikasil® SG-500

## DECLARATION OF PERFORMANCE
## No. 15754339

| | | |
|---|---|---|
| **1** | **UNIQUE IDENTIFICATION CODE OF THE PRODUCT-TYPE:** | 15754339 |
| **2** | **INTENDED USE/S** | ETA-03/0038/ ETAG 002 Part 1 Edition November 1999 (Revised March 2012) used as EAD<br>Structural sealant for use in structural sealant glazing kits |
| **3** | **MANUFACTURER:** | Sika Services AG<br>Tüffenwies 16-22<br>8064 Zürich |
| **4** | **AUTHORISED REPRESENTATIVE:** | |
| **5** | **SYSTEM/S OF AVCP:** | System 1 for SSGS kit Types II and IV,<br>System 2+ for SSGS kit Types I and III |
| **6b** | **EUROPEAN ASSESSMENT DOCUMENT:** | Guideline for European technical approval of "Structural sealant glazing systems", ETAG 002 Edition November 1999 (Revised March 2012) Part 1: "Supported and unsupported systems", used as European Assessment Document (EAD) according to Article 66 Paragraph 3 of Regulation (EU) No 305/2011. |
| | European Technical Assessment: | ETA-03/0038 of 16/03/2014 |
| | Technical Assessment Body: | Deutsches Institut für Bautechnik (DIBt) |
| | Notified body/ies: | 0757 |

## 7 DECLARED PERFORMANCE/S

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

Indications for reaction to fire and for design calculation see Annex 2.

### 3.1 Mechanical resistance and stability (BWR 1)

Requirements with respect to the mechanical resistance and stability of non-load bearing parts of the works are not included in this Essential requirement but are under the Essential Requirement safety in use, Section 3.4.

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

| Essential characteristic | Performance |
|---|---|
| Reaction to fire | Class F (no performance determined) |

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

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

Contents and/or release of dangerous substances:
The chemical composition of the structural sealant has to be in compliance with the composition deposited at the Technical Assessment Body (DIBt).
The structural sealant does not contain or release dangerous substances according to EOTA TR034 (version April2014), except WOC, VOC, SVOC - no performance determined. 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.

### 3.4 Safety and accessibility in use (BWR 4)

### 3.4.1 Essential characteristics for the structural bond according ETAG 002-1

| Essential characteristic | Performance |
|---|---|
| Characteristic stress at rupture -tension $Ru,_5$ | 0.84 MPa |
| Characteristic stress at rupture- dynamic shear $Ru,_S$ | 0.63 MPa |
| Modulus of elasticity in tension or compression tangential to the origin $E_O$ | 1.5 MPa |
| Modulus of elasticity in shear tangential to the origin $G_o$ | 0.5 MPa |
| 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 (see ETAG 002-1 Table 10 Checks during the production): The tested H-samples give the following result: Rupture 100% cohesive and breaking stress ≥ 0.7 MPa.

### 3.4.2 Structural sealant - identification characteristics

| Test | ETAG 002-1 reference | Result |
|---|---|---|
| Specific mass (mixed at 13/1 ratio) | 5.2.1.1 | $V_{mean}$ = 1.36 ± 0.025 g/cm$^3$ |
| Hardness Shore A | 5.2.1.2 | Mean of 39 (minimum of 34) |
| Thermogravimetric analysis | 5.2.1.3 | Curve kept in the technical file of the European Technical Assessment |
| Colour | 5.2.1.4 | 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.

### 3.4.3 Complementary products for preparing the structural seal adhesion surface

The characteristic values according section 3.4.1 apply, provided that the adhesion surfaces for the structural bond are in accordance with ETAG 002-1, Section 2.1. The following specifications as well as Annex 1 shall be respected.

#### 3.4.3.1 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 102042 is required from the glass producer:

Minimal scratch hardness according to EN ISO 1518-1[3]: 16 N
Porosity according to ASTM C 1048[4]: no porosity
Minimal gloss level according to DIN 67530[6] measuring a recess of 60: 20

#### 3.4.3.2 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[6].

#### 3.4.3.3 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®SG-500.

#### 3.4.3.4 Adhesion surface preparation

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

| | |
|---|---|
| Cleaning products: | Sika Cleaner G&M |
| | Sika Cleaner P |
| Activator: | Sika Aktivator 205 |
| | Sika Aktivator |
| Primer: | Sika Promer-790 |
| | Sika Primer-210 |

The data sheets of these products are deposited with Deutsches lnstitut 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 Services 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 7 of the respective European Technical Assessment of the kit.

#### 3.4.3.5 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 ± 0.5} mm thick sealant layer according to the method deposited with Deutsches lnstitut für Bautechnik. For the coating the structural sealant Sikasii®SG-500 as well as Sikasi IG-25of the company SIKA Services AG may be used. Only one of the following combinations (glass face- aluminum face) may be used thereby:
• Sikasil® SG-500 - Sikasil® SG-500
• Sikasil® IG-25- Sikasil® SG-500

#### 3.4.3.6 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)
- Sika-Glaze®IG-5 PIB (Polyisobutylen, 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).

### 3.5 Protection against noise (BWR 5)

Not applicable

### 3.6 Energy economy and heat retention (BWR 6)

| Essential characteristic | Performance |
|---|---|
| Thermal conductivity | 0.35 W/(m K) |

### 3.7 Sustainable use of natural resources (BWR 7)

For the sustainable use of natural resources no performance was investigated for this product.

### 3.8 General aspects

The verification of durability is part of testing the essential characteristics. Durability is only ensured if the specifications of intended use according the Sections 3.1 to 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 applier 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 date sheet and the labelling.

The structural sealant Sikasil® SG-500 shall be mixed at a ratio base (A} I 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 facade system, in which the structural sealant is used, will have to be verified. For this purpose a complementary European Technical Assessment for the kit according ETAG 002 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.

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**
Float glass with coating Sunstop Silber 20
Sunstop Silber 12
Sunstop ESG neutral 50

**AGC Glass Europe**
Stopsol SS clear

**Pilkington, Germany**
K-Glass

**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® Solar Silver Grey 32
SunGuard® Solar Light Blue 52

**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

**Johnson-Matthey, Maastricht, Netherlands**
Glass ceramic, white colour Nr. 75079

**4 Enamelled glass with inorganic coating**

**Guardian Europe**
SunGuard® Solar Silver Grey 32 with ceramic coating collection 140, Ferro AG
SunGuard® Solar Light Blue 52 with ceramic coating collection 140, Ferro AG
SunGuard® Solar Neutral 67 with ceramic coating collection 140, Ferro AG
SunGuard® Solar Neutral 60 with ceramic coating collection 140, Ferro AG
SunGuard® Solar RD 60 with ceramic coating collection 140, Ferro AG
SunGuard® Solar Pewter 30 with ceramic coating collection 140, Ferro AG
SunGuard® Solar Royal Blue 20 with ceramic coating collection 140, Ferro AG
SunGuard® Solar Silver 20 with ceramic coating collection 140, Ferro AG
SunGuard® Solar Silver 10 with ceramic coating collection 140, Ferro AG
SunGuard® Solar Silver 08 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 Konigsdorf Oberflächentechnik GmbH, Wolfhagen, Germany**
Process KOnigsdorf-HL1, all colours between E6/CO and E6/C35

**Anodising by HD Wahl GmbH, Jettingen-Scheppach, Germany**
Process HD-Wahi-HL2, all colours between E6/CO and E6/C35

**Anodising by BWB- Bürox AG, Buren a.A.,Switzerland**
Process BWB-HL3, colour: E6/CO

**Anodising by BWB-Altenrhein AG, Altenrhein, Switzerland**
Process BWB-HL4, colour: E6/CO

**Anodising by Gerhard Gotta GmbH & Co. KG, Rödermark, Germany**
Process Gotta-HLS, 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/CO

**Anodising by AluralLummen NV, Lummen, Belgium**
Process Alural-HL8, E6/CO

**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

**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 ETAG 002, 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

## 8 APPROPRIATE TECHNICAL DOCUMENTATION AND/OR - SPECIFIC TECHNICAL DOCUMENTATION

The performance of the product identified above is in conformity with the set of declared performance/s. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:

Name : Andrew Gillard
Function: Business Unit Manager
At Welwyn Garden City on 23 September 2019

. . . . . .

Name : Ana Mourato
Function: Product Manager
At Welwyn Garden City on 23 September 2019

. . . . . .

End of information as required by Regulation (EU) No 305/2011

## FULL CE MARKING

| |
|---|
| CE<br>03 |
| Sika Services AG, Zurich, Switzerland |
| 15754339 |
| ETAG 002 Part 1 Edition November 1999 (Revised March 2012) used as EAD |
| Notified Body 0757 |
| Structural sealant for use in structural sealant glazing kits |

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

Indications for reaction to fire and for design calculation see Annex 2.

### 3.1 Mechanical resistance and stability (BWR 1)

Requirements with respect to the mechanical resistance and stability of non-load bearing parts of the works are not included in this Essential requirement but are under the Essential Requirement safety in use, Section 3.4.

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

| Essential characteristic | Performance |
|---|---|
| Reaction to fire | Class F (no performance determined) |

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

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

Contents and/or release of dangerous substances:
The chemical composition of the structural sealant has to be in compliance with the composition deposited at the Technical Assessment Body (DIBt).
The structural sealant does not contain or release dangerous substances according to EOTA TR034 (version April2014), except WOC, VOC, SVOC - no performance determined. 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.

### 3.4 Safety and accessibility in use (BWR 4)

### 3.4.1 Essential characteristics for the structural bond according ETAG 002-1

| Essential characteristic | Performance |
|---|---|
| Characteristic stress at rupture -tension $Ru,_5$ | 0.84 MPa |
| Characteristic stress at rupture- dynamic shear $Ru,_S$ | 0.63 MPa |
| Modulus of elasticity in tension or compression tangential to the origin $E_O$ | 1.5 MPa |
| Modulus of elasticity in shear tangential to the origin $G_o$ | 0.5 MPa |
| 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 (see ETAG 002-1 Table 10 Checks during the production): The tested H-samples give the following result: Rupture 100% cohesive and breaking stress ≥ 0.7 MPa.

### 3.4.2 Structural sealant - identification characteristics

| Test | ETAG 002-1 reference | Result |
|---|---|---|
| Specific mass (mixed at 13/1 ratio) | 5.2.1.1 | $V_{mean}$ = 1.36 ± 0.025 g/cm$^3$ |
| Hardness Shore A | 5.2.1.2 | Mean of 39 (minimum of 34) |
| Thermogravimetric analysis | 5.2.1.3 | Curve kept in the technical file of the European Technical Assessment |
| Colour | 5.2.1.4 | 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.

### 3.4.3 Complementary products for preparing the structural seal adhesion surface

The characteristic values according section 3.4.1 apply, provided that the adhesion surfaces for the structural bond are in accordance with ETAG 002-1, Section 2.1. The following specifications as well as Annex 1 shall be respected.

#### 3.4.3.1 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 102042 is required from the glass producer:

Minimal scratch hardness according to EN ISO 1518-1[3]: 16 N
Porosity according to ASTM C 1048[4]: no porosity
Minimal gloss level according to DIN 67530[6] measuring a recess of 60: 20

#### 3.4.3.2 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[6].

#### 3.4.3.3 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®SG-500.

#### 3.4.3.4 Adhesion surface preparation

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

| | |
|---|---|
| Cleaning products: | Sika Cleaner G&M |
| | Sika Cleaner P |
| Activator: | Sika Aktivator 205 |
| | Sika Aktivator |
| Primer: | Sika Promer-790 |
| | Sika 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 Services 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 7 of the respective European Technical Assessment of the kit.

#### 3.4.3.5 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 ± 0.5} mm thick sealant layer according to the method deposited with Deutsches Institut für Bautechnik. For the coating the structural sealant Sikasii®SG-500 as well as Sikasi IG-25of the company SIKA Services AG may be used. Only one of the following combinations (glass face- aluminum face) may be used thereby:

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

#### 3.4.3.6 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)
- Sika-Glaze®IG-5 PIB (Polyisobutylen, 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).

### 3.5 Protection against noise (BWR 5)

Not applicable

### 3.6 Energy economy and heat retention (BWR 6)

| Essential characteristic | Performance |
|---|---|
| Thermal conductivity | 0.35 W/(m K) |

### 3.7 Sustainable use of natural resources (BWR 7)

For the sustainable use of natural resources no performance was investigated for this product.

### 3.8 General aspects

The verification of durability is part of testing the essential characteristics. Durability is only ensured if the specifications of intended use according the Sections 3.1 to 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 applier 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 date sheet and the labelling.

The structural sealant Sikasil® SG-500 shall be mixed at a ratio base (A} I 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 facade system, in which the structural sealant is used, will have to be verified. For this purpose a complementary European Technical Assessment for the kit according ETAG 002 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.

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**
Float glass with coating Sunstop Silber 20
Sunstop Silber 12
Sunstop ESG neutral 50

**AGC Glass Europe**
Stopsol SS clear

**Pilkington, Germany**
K-Glass

**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® Solar Silver Grey 32
SunGuard® Solar Light Blue 52

**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

**Johnson-Matthey, Maastricht, Netherlands**
Glass ceramic, white colour Nr. 75079

## 4 Enamelled glass with inorganic coating

**Guardian Europe**
SunGuard® Solar Silver Grey 32 with ceramic coating collection 140, Ferro AG
SunGuard® Solar Light Blue 52 with ceramic coating collection 140, Ferro AG
SunGuard® Solar Neutral 67 with ceramic coating collection 140, Ferro AG
SunGuard® Solar Neutral 60 with ceramic coating collection 140, Ferro AG
SunGuard® Solar RD 60 with ceramic coating collection 140, Ferro AG
SunGuard® Solar Pewter 30 with ceramic coating collection 140, Ferro AG
SunGuard® Solar Royal Blue 20 with ceramic coating collection 140, Ferro AG
SunGuard® Solar Silver 20 with ceramic coating collection 140, Ferro AG
SunGuard® Solar Silver 10 with ceramic coating collection 140, Ferro AG
SunGuard® Solar Silver 08 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 Konigsdorf Oberflächentechnik GmbH, Wolfhagen, Germany**
Process KOnigsdorf-HL1, all colours between E6/CO and E6/C35

**Anodising by HD Wahl GmbH, Jettingen-Scheppach, Germany**
Process HD-Wahi-HL2, all colours between E6/CO and E6/C35

**Anodising by BWB- Bürox AG, Buren a.A.,Switzerland**
Process BWB-HL3, colour: E6/CO

**Anodising by BWB-Altenrhein AG, Altenrhein, Switzerland**
Process BWB-HL4, colour: E6/CO

**Anodising by Gerhard Gotta GmbH & Co. KG, Rödermark, Germany**
Process Gotta-HLS, 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/CO

**Anodising by AluralLummen NV, Lummen, Belgium**
Process Alural-HL8, E6/CO

## 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

**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 ETAG 002, 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

| |
|---|
| dop.sika.com |

## CE MARKING TO BE PLACED ON THE LABEL

| |
|---|
| CE |
| 03 |
| Sika Services AG, Zurich, Switzerland |
| 15754339 |
| ETAG 002 Part 1 Edition November 1999 (Revised March 2012) used as EAD |
| Notified Body 0757 |
| Structural sealant for use in structural sealant glazing kits |
| For details see accompanying documents |
| dop.sika.com |

## ECOLOGY, HEALTH AND SAFETY INFORMATION (REACH)

This product is an article as defined in article 3 of regulation (EC) No 1907/2006 (REACH). It contains no substances which are intended to be released from the article under normal or reasonably foreseeable conditions of use. A safety data sheet following article 31 of the same regulation is not needed to bring the product to the market, to transport or to use it. For safe use follow the instructions given in the product data sheet. Based on our current knowledge, this product does not contain SVHC (substances of very high concern) as listed in Annex XIV of the REACH regulation or on the candidate list published by the European Chemicals Agency in concentrations above 0,1 % (w/w).

## LEGAL NOTE

**Sika Limited**
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https://gbr.sika.com/

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Sika House, Ballymun
Industrial Estate
Dublin, D11 DA2V
Ireland
https://irl.sika.com/