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European Technical Assessment

ETA-06/0090_V3
of 16/07/2025

GENERAL PART

Technical Assessment Body issuing the ETA:

CSTB (Centre Scientifique et Technique du Bâtiment)

Trade name of the construction product

Sikasil® SG-20

Product family to which the construction product belongs

Bonded glazing kits and bonding sealants

Manufacturer

Sika Services AG
Tueffenwies 16
CH-8048 ZUERICH
SWITZERLAND

Manufacturing plant(s)

Sika Limited
Site 41, Knowsthorpe Way
Cross Green Industrial Estate
LS9 0SW Leeds
United Kingdom

Sika Manufacturing Polyurethans S.r.l.
Via Luigi Einaudi 6
20068 Peschiera Borromeo (MI)
Italy

This European Technical Assessment contains

8 pages including 4 pages of 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 ETA replaces

ETA 06/0090_V2, issued on 14/10/2024

Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and should be identified as such.

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SPECIFIC PART

1. Technical description of the product

The bonding sealant Sikasil® SG-20 is a silicone-based sealant to be used in bonded glazing kit as defined in EAD 090010-00-0404 for use as facades, roofs glazing or part of it. The kit itself is not covered by this ETA.

Proprieties and characteristics of bonding sealant:

Properties & Characteristics			Sikasil® SG-20
Design stress in dynamic tension	$\sigma_{des} =$		0.17 MPa
Design stress in dynamic shear	$\tau_{des} =$		0.12 MPa
Elastic modulus in tension or compression tangential to the origin	$E_O =$		1.05 MPa
Elastic modulus in shear tangential to the origin	$G_O =$		0.35 MPa
Secant stiffness in tension at 12,5% elongation	$K_{12,5} =$		2.1 MPa
Design shear stress under permanent load	$\Gamma_{\infty} =$		0.012 MPa
Resistance to tearing			Use category A
Colour			black / grey / white
Skinning time	at 23°C	50% RH	Approx. 15 min
Tack free time	at 23°C	50% RH	Approx. 160 min
Curing rate	at 23°C	50% RH	$\approx 2 - 5 \text{ mm/24 h}$ $\approx 4 - 5 \text{ mm/72 h}$

Complementary products of bonding sealant adhesion surface preparation

Primer and cleaning product to be used:

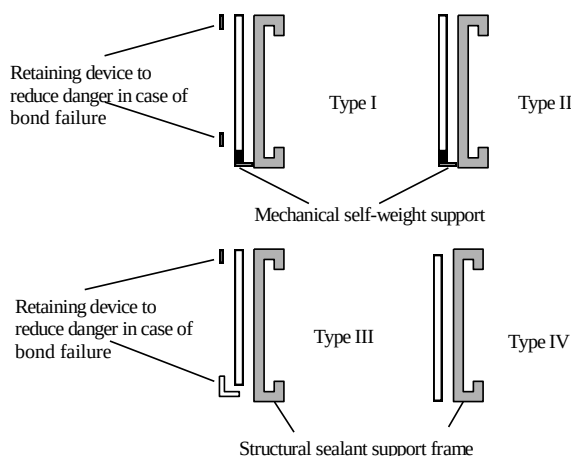
- Sika® Aktivator-205
- Sika® Aktivator-100
- Sika® Cleaner P
- Sika® Cleaner G+M

The choice of the pre-treatment product must be done according to the results of adhesion tests which are provided by the sealant manufacturer for a particular project.

2. Specification of the intended use(s) in accordance with the applicable European Assessment Document (hereinafter EAD)

The bonding sealant Sikasil® SG-20 is to be used in bonded glazing kit to bond glazing products on metallic support frames.

Sikasil® SG-20 is a single component sealant which can be used in types I to IV according to EAD 090010-00-0404 Table 1.1.1.1 – Bonded glazing kit types.



The fitness for use of kits using this bonding sealant shall be verified separately by means of a complementary ETA based on EAD 090010-00-0404.

The essential requirements BWR2 Safety in case of fire, BWR3 Hygiene, health and environment and BWR4 Safety and accessibility in use, shall be fulfilled, and failure of the bonding sealant bond would cause risk to human life and/or have considerable economic consequences.

The provisions made in this European Technical Assessment are based on the assumed working life of the bonding sealant of 25 years. The assumed working life of a system cannot be taken as a guarantee given by the producer but are to be used as a mean for selecting the appropriate product 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

The assessment of the fitness for use of the bonding sealants for the intended use in relation to the requirements for safety in case of fire, hygiene, health and environment, safety in use in the sense of Essential Requirements 2, 3 and 4 has been carried out in accordance with EAD 090010-00-0404.

3.1 Safety in case of fire (BWR2)

Reaction to fire: No performance assessed.

3.2 Hygiene, health and the environment (BWR3)

Dangerous substances:

The Manufacturer declared the presence of dangerous substances in conformity with the Council Regulation 1272/2008 (CLP) and supplied the SDS (safety data sheet).

In addition to the specific clauses relating to dangerous substances contained in this ETA, there may be other requirements applicable to the sealants (e.g. transposed European legislation and national laws, regulations and administrative provisions).

In order to meet the provisions of the EU Construction Product Regulation, these requirements need also to be complied with, when and where they apply.

3.3 Safety and accessibility in use (BWR4)

The characteristics of the sealants have been successfully subjected to the following tests, which are relevant for sealant: EAD 090010-00-0404, clauses 2.2.14, 2.2.14.3, 2.2.14.4 and 2.2.15.

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

According to Decision 96/582/EC (Decision of the Commission of 24 June 1996, OJ No L 254 of 08.10.1996, p. 62), as amended by Decision 2001/596/EC (Decision of the Commission of 8 January 2001, L 209 of 2.8.2001, p. 33)¹, the systems of AVCP given in the following table apply:

Product	Intended use	System
Bonding sealant	Kit Types II and IV	1
	Kit Types I and III	2+

The bonding sealants can be used as components of any of bonding glazing kit I, II, III or IV. Consequently, only system 1 applies.

Tasks and responsibilities are described in Annex 1.

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 the CSTB.

The control plan is given in Annex 1 and assumptions under which the fitness of the products for the intended use was favourably assessed are given in Annex 2.

Issued in Champs-sur-Marne, on 16/07/2025

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Head of "Certification and Assessment"
Division "Building Envelope" Direction



¹ Decisions are published in the *Official Journal of the European Union (OJEU)*, see : <http://eur-lex.europa.eu/oj/direct-access.html>

Annexes

Responsibilities

System of attestation of conformity 1 according to Council Directive 96/582/EC Annex III laid down by the European Commission provides:

1) Task for the Manufacturer

- a. Factory Production Control (FPC);
- b. testing of samples taken at the factory by the Manufacturer in accordance with a prescribed test plan.

2) Task for the notified body

- a. Initial inspection of the manufacturing plant and factory production control.
- c. Continuous surveillance, assessment, and approval of the factory production control.

1. Tasks of the Manufacturer, factory production control

1.1 Factory production control

The Manufacturer has a factory production control system in its plant and exercises permanent internal control of production. All the elements, requirements and provisions adopted by the Manufacturer are documented in a systematic manner in the form of written policies and procedures. This production control system ensures that the product is in conformity with the European Technical Assessment.

The incoming materials are subjected to controls and tests by the Manufacturer before acceptance according to a prescribed test plan.

The Manufacturer proceeds to controls during the production according to specific policies. Those controls include:

- Colour, appearance, viscosity.
- Tack-free time, skin time, shore A-hardness, sag-test, tensile strength and elongation at break at initial state and after conditioning C2 according EAD 090010-00-0404, peel adhesion to glass and to aluminium at initial state and after conditioning C2 according EAD 090010-00-0404 (3 samples after 7 days immersion in water at $(23 \pm 2)^{\circ}\text{C}$ and 3 samples after 7 days in an oven at $(100 \pm 2)^{\circ}\text{C}$).

The results of factory production control are recorded and evaluated. The records include at least the following information:

- Designation of the product;
- Batch number;
- Type of testing;
- Results of testing and comparison with the requirements.

BONDING SEALANT	ANNEX 1 (1/2) of ETA-06/0090
Tasks and responsibilities	

2. Tasks of notified bodies

2.1 Initial type test

For initial type testing, the results of the tests performed as part of the assessment for the European Technical Assessment shall be used unless there are changes in the production line or plant. In such cases, the necessary initial type testing must be agreed between the *Centre Scientifique et Technique du Bâtiment* (CSTB) and the notified body involved.

2.2 Initial inspection of the factory and factory production control

The notified body shall ascertain that, in accordance with the prescribed test plan, the factory and the factory production control are suitable to ensure continuous and orderly manufacturing of the sealant according to the specification given in chapter 2.1, ANNEX 1 of the ETA.

2.3 Continuous surveillance

The notified body shall visit the factory twice per year.

It has to verify the continuing conformity to the ETA taking into account the prescribed test plan.

This continuous surveillance is performed as per EAD 090010-00-0404 clause 3.3.

2.4 Certification

When all criteria for conformity attestation are fulfilled, the notified body shall issue a certificate of conformity with this ETA (for System 1).

3. CE marking

The CE marking shall be affixed on each cartridge or packaging of sealant. The symbol "CE" shall be accompanied by the following information:

- Name of identifying mark of the producer and plant,
- Identification number of the notified body,
- Identity of the product (commercial name),
- ETA number,
- Number of EC certificate of conformity,
- DoP,
- EAD 090010-00-0404 (edition 2018) reference.

BONDING SEALANT	ANNEX 1 (2/2) of ETA-06/0090
Tasks and responsibilities	

1. Manufacturing

The sealants are manufactured by Sika Limited (United Kingdom) and Sika Manufacturing Polyurethans S.r.l. (Italy) in accordance to the provisions of the European Technical Assessment using a specific manufacturing process as identified during inspection of the plant by the *Centre Scientifique et Technique du Bâtiment (CSTB)* and the notified body and laid down in the technical document.

The maximum delay of use of sealant after the manufacturing is 9 months.

2. Installation

2.1 Suitable substrates for bonding sealant surface

The suitable substrates are given hereafter:

1) Anodised aluminium alloy.

Alloy (EN 573-3)	Metallurgic state (EN 515)	Mechanical Characteristics	Anodisation
EN AW 6060	T5	EN 755-2	Class 15 min
EN AW 6063	T6		

2) Float glass conforming to EN 572 “Glass in Building – Basic Products”, Part 1, 2, 4, 5 and eventually thermally treated glass (conform to EN 1863 “Glass in Building – Heat Strengthened Glass” and EN 12150 “Glass in Building – Thermally Toughened Safety Glass”).

The coated glass must comply with the requirements of EAD 090010-00-0404 Annex D.3.1.1.4. Coating not complying with that must be removed and adhesion tested.

For any other substrate, the assessment shall be performed by reference to EAD 090010-00-0404 § 2.2.14 § 2.2.15 and they must be certified by an assessment body.

BONDING SEALANT		ANNEX 2 (1/2) of ETA-06/0090
Assumptions under which the fitness of the product(s) for the intended use was favourably assessed		

2.2 Design of Bonded Glazing System

Water stagnation is not allowed in the vicinity of the bonding sealant. The bonding sealant shall be designed to provide sufficient drainage and ventilation around the sealant section.

The bonded glazing system shall be designed to allow the realisation of a regular, rectangular bonding sealant bead nor discontinuous substrate.

2.3 Application of the sealant

The ETA Manufacturer provides to his clients a complete procedure for the bonding and specifications for installation including the following conditions:

- Temperature of application between +5°C and +40°C in a workshop, in a dust free location.
- The substrates shall be free from superficial condensation free of all loose material, dirt, rust on oil and other contaminants.
- Procedure for cleaning the substrates.
- Procedure for application of the primer when necessary.
- Optimum conditions for application of the sealant itself: gunning temperature between + 15°C and + 30°C with relative humidity between 40% and 80%.
- Storage: the bonded frame must be stored horizontally (for at least 7 days after sealing depending on the joint thickness).
The successive storage (between 7 days and 21 days) depends on the curing process and environmental conditions, respectively, and must be defined jointly with Sika's Technical Service.
- Time before loading if curing under these conditions: 21 days. Nevertheless, earlier transportation to work site is possible, if the joint is completely cured and following conditions are met (see EAD 090010-00-0404, table 3.4.1.2.2.1 -Treatment of results): the test H-samples give the following results: rupture 90% cohesive and break stress ≥ 0.7 MPa.

2.4 Recommendation for facade cleaning product

It is recommended to use the following product for facades cleaning.

- 1% solution of a neutral detergent in water (pH = 7).

Nevertheless, the assessment of the façade cleaning agent must be done in the framework of the ETA for the kit to check compatibility aspect with other components.

2.5 Chemical compatibility

No assessment has been made in the framework of the present ETA.

2.6 Responsibility of the ETA Manufacturer

It is the responsibility of the ETA Manufacturer to ensure that the information on the related component requirements and their fabrication and setting is given to the person concerned. This information may be made by reproduction of the relevant parts of the European Technical Assessment.

2.7 Distribution

The sealant is put on the market under the following condition:

Supplier	Trade name
Sika Services AG	Sikasil® SG-20

BONDING SEALANT	ANNEX 2 (2/2) of ETA-06/0090
Assumptions under which the fitness of the product(s) for the intended use was favourably assessed	