BUILDING TRUST

PRODUCT DATA SHEET

Sikasil® WS-290 EU

Highly flexible, Silicone weatherproofing sealant, CE-marked

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Chemical base		1-component silicone
Colour (CQP001-1)		Various colours available [A]
Cure mechanism		Moisture-curing
Cure type		Neutral
Density (uncured)		1.24 kg/l
Non-sag properties (CQP061-4 / ISO 7390)		Good
Application temperature	ambient	5 – 40 °C
Skin time (CQP019-1)		40 minutes [B]
Tack free time (CQP019-3)		100 minutes [B]
Curing speed (CQP049-1)		(See diagram)
Shore A hardness (CQP023-1 / ISO 48-4)		11 [C]
Tensile strength (CQP036-1 / ISO 527)		0.9 MPa [C]
100 % modulus (CQP036-1 / ISO 527)		0.3 MPa [C]
Elongation at break (CQP036-1 / ISO 527)		650 % [C]
Tear propagation resistance (CQP045-1 / ISO 34)		3.7 N/mm
Service temperature		-40 – 150°C
Shelf life		9 months [D]

CQP = Corporate Quality Procedure
[A] colour defined by local sales organisation
[B] 23 °C / 50 % r.h.
[C] after 28 days curing at 23 °C / 50 % r.h.
[D] stored below 25 °C

DESCRIPTION

Sikasil® WS-290 EU is a durable, neutral-curing silicone sealant with a high movement capability and excellent adhesion to a wide range of substrates. It is particularly suited as a weather seal for precast concrete structures, curtain walling and window installation.

PRODUCT BENEFITS

- Meets requirements of
  EN 15651-1 F-EXT-INT 25 LM
  EN 15651-2 G 25 LM
- ASTM C719 for Type S, Class 100/50 (movement capability +100% / -50 %)
- Provided with CE-mark according to EN 15651-1 /-2: 2012 certified by Control Body 1119
- Outstanding UV and weathering resistance
- Adheres well to glass, metals, precast concrete

AREAS OF APPLICATION

Sikasil® WS-290 EU can be used for weatherproofing and sealing applications where durability under severe conditions is required.
It is particularly suited as a weather seal for precast concrete structures, curtain walling and window installation.
This product is suitable for experienced professional users only. Tests with actual substrates and conditions have to be performed to ensure adhesion and material compatibility.

CURE MECHANISM

Sikasil® WS-290 EU cures by reaction with atmospheric moisture. At low temperatures the water content of the air is generally lower and the curing reaction proceeds somewhat slower (see diagram 1).
The curing speed of the reaction depends mainly on the relative humidity and temperature. Material temperature above 50 °C could lead to bubble formation and has to be avoided.

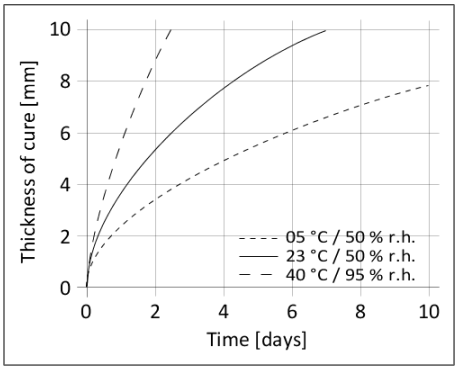

Diagram 1: Curing speed Sikasil® WS-290 EU

METHOD OF APPLICATION

Surface Preparation

Surfaces must be clean, dry and free from grease, oil and dust. Surface treatment depends on the specific nature of the substrates and is crucial for a long lasting bond.

Application

The optimum temperature for substrate and sealant is between 15 °C and 25 °C.
Sikasil® WS-290 EU can be processed with hand, pneumatic or electric driven piston guns.
Joints must be properly dimensioned.
For optimum performance the joint width needs to be designed according to the movement capability of the sealant based on the actual expected movement. The minimum joint depth is 6 mm and a width / depth ratio of minimum 2 : 1 and maximum 4 : 1 must be respected. Joints deeper than 15 mm must be avoided.
For backfilling it is recommended to use closed cell, sealant compatible foam backer rods e.g. high resilience polyethylene foam rod. If joints are too shallow for backing material to be employed, we recommend using a polyethylene tape. This acts as a release film (bond breaker), allowing the joint to move and the silicone to stretch freely.

Tooling and finishing

Tooling and finishing must be carried out within the skin time of the sealant or adhesive. When tooling freshly applied Sikasil® WS-290 EU press the adhesive to the joint flanks to get a good wetting of the bonding surface. No tooling agents to be used.

Removal

Uncured Sikasil® WS-290 EU can be removed from tools and equipment with Sika® Remover-208 or another suitable solvent. Once cured, the material can only be removed mechanically. Hands and exposed skin have to be washed immediately using hand wipes such as Sika® Cleaner-350H or a suitable industrial hand cleaner and water.
Do not use solvents on skin.

Overpainting

Sikasil® WS-290 EU cannot be overpainted.

Application Limits

For specific information regarding compatibility between various Sikasil® products contact the Technical Department of Sika Industry.
To exclude materials influencing Sikasil® WS-290 EU, all materials such as gaskets, tapes, setting blocks, sealants, etc., in direct and indirect contact have to be approved by Sika in advance.
Where two or more different reactive sealants are used, allow the first to cure completely before applying the next one. Sikasil® WS-290 EU may only be used in combination with structural glazing applications after a detailed examination of the corresponding project details.
Do not use Sikasil® WS-290 EU on PMMA and PC elements as it may cause environmental stress cracking (crazing).

FURTHER INFORMATION

The information herein is offered for general guidance only. Advice on specific applications is available on request from the Technical Department of Sika Industry.
Copies of the following publications are available on request:

- Safety Data Sheets
- General Guideline
  Sikasil® Weather Sealants

PACKAGING INFORMATION

Unipack	600 ml

BASIS OF PRODUCT DATA

All technical data stated in this document are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

HEALTH AND SAFETY INFORMATION

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

DISCLAIMER

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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