Industry

Sikasil® WS-355

High performance natural stone sealant

Technical Product Data

Chemical base		1-C silicone
Color (CQP[1] 001-1)		See product overview
Cure mechanism		Moisture-curing
Cure type		Neutral
Density (uncured) (CQP 006-4)		1.49 kg/l approx.
Non-sag properties (CQP 061-4 / ISO 7390)		< 2 mm approx.
Application temperature		5 - 40°C (41 - 104°F)
Skin time[2] (CQP 019-2)		20 min approx.
Tack-free time[2] (CQP 019-1)		120 min approx.
Curing speed (CQP 049-1)		See diagram 1
Shore A-hardness (CQP 023-1 / ISO 868)		22 approx.
Tensile strength (CQP 036-1 / ISO 37)		1.0 N/mm^2 approx.
Elongation at break (CQP 036-1 / ISO 37)		800% approx.
Tear propagation resistance (CQP 045-1 / ISO 34)		4 N/mm approx.
100% modulus (CQP 036-1 / ISO 37)		0.3 N/mm^2 approx.
Movement accommodation capability (ASTM C 719)		± 50%
Thermal resistance (CQP 513-1) Short term	long term 4 h 1 h	180°C (356°F) approx. 200°C (392°F) approx. 220°C (428°F) approx.
Service temperature		-40 - 150°C approx. (-40 - 302°F)
Shelf life (storage below 25°C) (CQP 016-1)		12 months

[1] CQP = Corporate Quality Procedure [2] 23°C (73°F) / 50% r.h.

Description

Sikasil® WS-355 is a neutral curing silicone sealant with a high movement capability and excellent adhesion to porous and non-porous substrates.
Sikasil® WS-355 is manufactured in accordance with ISO 9001 quality assurance system and the responsible care program.

Product Benefits

- Does not stain areas adjacent to the joint
- Meets requirements of ISO 11600 25 LM F & G, ASTM C 920 (class 50), ASTM C 1248, TT-S00230C, TT-S001543A
- Outstanding UV and weathering resistance.
- Adheres well to natural stone, concrete, glass, metals, coated and painted metals, plastics and wood.

Areas of Application

Sikasil® WS-355 is a high-performance sealant particularly suitable for jointing natural stone, such as marble, granite, sandstone and quartzite. With these materials, no staining of the joint edges occurs, unlike with conventional silicone sealants.
Sikasil® WS-355 is ideal for sealing facades, e.g. cladding of natural stone or other materials.
This product is suitable for professional experienced users only. Tests with actual substrates and conditions have to be performed to ensure adhesion and material compatibility.

Cure Mechanism

Sikasil® WS-355 cures by reaction with atmospheric moisture. The reaction thus starts at the surface and proceeds to the core of the joint. The curing speed depends on the relative humidity and the temperature (see diagram 1 below). Heating above 50°C to speed-up the vulcanization is not advisable as it may lead to bubble formation. At low temperatures the water content of the air is lower and the curing reaction proceeds more slowly.

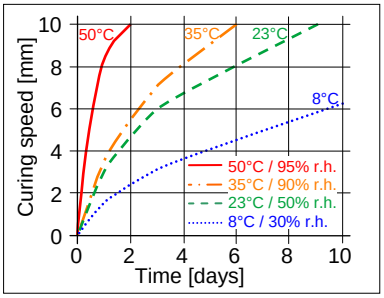

Diagram 1:Curing speed 1C-Sikasil®

Application Limits

All Sikasil® WS, FS, SG, IG, WT and other engineering silicone sealants and adhesives are compatible with each other. Sikasil® WS and FS sealants are compatible with SikaGlaze® IG sealants. All other sealants have to be approved by Sika before using them in combination with Sikasil® WS-355. Where two or more different reactive sealants are used, allow the first to cure completely before applying the next.

Do not use Sikasil® WS-355 on pre-stressed polyacrylate and polycarbonate elements as it may cause environmental stress cracking (crazing).

The compatibility of gaskets, backer rods and other accessory materials with Sikasil® WS-355 must be tested in advance.

Joints deeper than 15 mm should be avoided.

The above information is offered for general guidance only. Advice on specific applications will be given on request.

Method of Application

Surface preparation

Surfaces must be clean, dry and free from oil, grease and dust.

Advice on specific applications and surface pretreatment methods is available from the Technical Service Department of Sika Industry.

Application

After suitable joint and substrate preparation, Sikasil® WS-355 is gunned into place. Joints must be properly dimensioned as changes are no longer possible after construction. For optimum performance the joint width should 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 2:1 must be respected. 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.

For more information please contact the Technical Service Department of Sika Industry.

Tooling and finishing

Tooling and finishing must be carried out within the skin time of the adhesive.

When tooling freshly applied Sikasil® WS-355 press the adhesive to the joint flanks to get a good wetting of the bonding surface.

Removal

Uncured Sikasil® WS-355 may 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 should be washed immediately using Sika® Handclean Towel or a suitable industrial hand cleaner and water. Do not use solvents!

Overpainting

Sikasil® WS-355 cannot be overpainted.

Further Information

Copies of the following publications are available on request:

- Material Safety Data Sheet

Packaging Information

Cartridge	300 ml
Unipack	600 ml

Value Bases

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

Health and Safety Information

For information and advice regarding transportation, handling, storage and disposal of chemical products, users should refer to the actual Material Safety Data Sheets containing physical, ecological, toxicological and other safety-related data.

Legal Notes

Further information available at:
www.sika.ch
www.sika.com

Sika Schweiz AG
Industry
Tüffenwies 16
CH-8048 Zurich
Switzerland
Tel. +41 44 436 40 40
Fax +41 44 436 45 30