Product Data Sheet
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Sikasil® WS-355

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1-Part Silicone Sealant for Natural Stone / Matt Surface

Product Description	Sikasil® WS-355 is a neutral, 1-part, moisture curing, elastic joint sealant based on silicone.
Uses	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.
Characteristics / Advantages	■ Neutral curing system ■ Ready to use ■ Solventless ■ Non-sag ■ Ready gunnability at low (+5°C) and high (+40°C) temperatures ■ Rapid curing: quickly becomes tackfree ■ Low shrinkage on cure ■ After cure: elastic at low (-40°C) and high (+150°C) temperatures ■ Outstanding UV and weathering resistance ■ Compatible with natural stone such as marble, granite, sandstone and quartzite: no discoloration of the stone ■ Non-staining and non-bleeding: no staining of the joint area by plasticizer ■ Compatible with water-based and solvent-based paints: no migration of plasticizer ■ Bonds to many materials without primer ■ Not corrosive to metals ■ Matt surface ■ suitable for use on alkaline substrates such as concrete and mortar

Tests

Approvals / Standards	ISO 11600: Classification of sealants for Building Construction: F + G - 25 LM ASTM C1248: Non-staining sealant, suitable for natural stone. DIN 18540: Sealing of joints in external walls using building sealants ASTM C920: Elastic joint sealants: Type S, Grade NS, Class 50, Use NT, G, A and M TT-S-001543 A: Sealing compound: silicone rubber base (for caulking, sealing and glazing in buildings and other structures). Class A - compounds resistant to 50% maximum total joint movement. TT-S-00230 C: Sealing compound: elastomeric type, single component (for caulking, sealing and glazing in buildings and other structures), type II, class A. BS 5889; 1989: “One-part gun grade silicone-based sealants”: type A Sealant for general use in construction joints UNI 9610, 9611: Silicone sealant for joints - requirements and tests, packaging.

Product Data

Form

Colour	See product overview. On request, Sika can supply any colour, matched to the customer’s sample. For further information, contact your sales manager or your nearest Sika sales office.
Packaging	600 ml sausages, 20 sausages per box 310 ml cartridges, 25 cartridges per box 300 ml cartridges, 25 cartridges per box Other packaging, e.g., for industrial applications, can be supplied on request.

Storage

Storage Conditions / Shelf Life	15 months from date of production if stored in undamaged original sealed containers, in dry conditions and protected from direct sunlight at temperatures between +5°C and +25°C.

Technical Data

Chemical Base	1-part silicone, moisture curing	
Density	~ 1.49 kg/l	(ISO 1183-B)
Skinning Time	~ 20 minutes (+23°C / 50% r.h.)	
Tack-free Time	~ 120 minutes (+23°C / 50% r.h.)	
Curing Rate	~ 4 mm / 24 h (+23°C / 50% r.h.)	
Movement Capability	± 25% ± 50%	(ISO 11600) (ASTM C920)
Joint Dimensions	6 mm min. width / 40 mm max. width	
Sag Flow	Non-sag	(ISO 7390, Profile U20)
Service Temperature	-40°C to +150°C (after vulcanisation)	

Mechanical Properties

Tear Strength	~ 4.0 N/mm after 4 weeks (+23°C / 50% r.h.)	(ISO 34-C)
Shore A Hardness	~ 20 after 4 weeks (+23°C / 50% r.h.)	(ISO 868)
E-Modulus	~ 0.31 N/mm^2 at 100% elongation after 4 weeks (+23°C / 50% r.h.) ~ 0.28 N/mm^2 at 100% elongation after 4 weeks (+23°C / 50% r.h.)	(ISO 37, rod S2) (ISO 8339-A)
Tensile Strength	~ 0.88 N/mm^2 after 4 weeks (+23°C / 50% r.h.) ~ 0.47 N/mm^2 after 4 weeks (+23°C / 50% r.h.)	(ISO 37, rod S2) (ISO 8339-A)
Elongation at Break	~ 800 % after 4 weeks (+23°C / 50% r.h.) ~ 450% after 4 weeks (+23°C / 50% r.h.)	(ISO 37, rod S2) (ISO 8339-A)

System Information

Application Details

Consumption

The joint width must be designed to accommodate the movement capability of the sealant. The joint width must be > 6 mm and < 40 mm. The width to depth ratio of ~ 2 : 1 must be respected.

Standard dimensions for concrete elements (as per DIN 18540 / table 3)

Joint distance	2 m	2 - 3.5 m	3.5 - 5 m	5 - 6.5 m	6.5 - 8 m
Joint width	15 mm	20 mm	25 mm	30 mm	35 mm
Joint depth	8 mm	10 mm	12 mm	15 mm	15 mm

Minimum joint width for joints around windows: 10 mm

Joints must be properly dimensioned as changes are no longer possible after construction. Basis for calculation of the necessary joint width are the technical characteristic values of the joint sealant and the adjacent building materials, the exposure of the building elements, their construction and size.

Joint width	8 mm	10 mm	15 mm	20 mm	25 mm	30 mm
Joint depth	6 mm	8 mm	8 mm	10 mm	12 mm	15 mm
Joint length / 600 ml	~ 12.5 m	~ 7.5 m	~ 4.5 m	~ 2.5 m	~ 1.6 m	~ 1.3 m

The stated values are indications only.

Backfilling: It is recommended to use closed cell, sealant compatible foam backer rods e.g. high resilience polyethylene foam rod. If joints e.g. triangle 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.

Substrate Preparation / Priming	*Cleaning* Substrates must be clean and dry, homogeneous, free from grease, dust and loose particles. Contaminated surfaces may be cleaned mechanically, if porous, or with a solvent if nonporous. Glass may be cleaned with water containing a surfactant or with a solvent. Metals may also be cleaned with a solvent. In the latter case, apply the solvent with a clean, oilfree, lintfree cloth. Remove residual solvent with a fresh, clean dry cloth before it evaporates. *Priming* Sikasil® Primers are not cleaning agents. Therefore clean the surface as described for “Cleaning” by the two cloths method. Subsequently: - Pour a small amount of primer onto a clean, lint-free, dry cloth and apply it in one operation. Never dip the cloths into the primer! - Only apply Sikasil® Primers (esp. Sikasil® Primer-790) in a thin layer, since otherwise the surface will be cracked and brittle and Sikasil® silicone sealant may no longer bond properly. - Once the primer has been applied, it is essential that no more solvent gets onto the surface and that there is no further contamination. - Allow to dry for the time given below and then apply Sikasil® silicone sealant within the flash-off mentioned. *Sikasil® Primer-790:* - For metals e.g. aluminium, stainless steel, galvanised steel - For powder coatings, e.g. polyester, EP and PU coatings, PVDF coatings - Flash off time: min. 20 minutes, max. 2 hours *Sikasil® Primer-783:* - For porous substrates e.g. concrete, aerated concrete and cement plaster - Flash off time: min. 30 minutes, max. 8 hours

Application Conditions / Limits

Substrate Temperature	+5°C min. / +40°C max.
Air Temperature	+5°C min. / +40°C max.
Substrate Humidity	Dry

Application Instructions

Application Method / Tools	Sikasil® WS-355 is ready to use. After suitable joint and substrate preparation, the sealant is gunned into place and tooled with a spatula or suitable smoothing liquid. When tooling Sikasil® WS-355 press the sealant to the joint flanks.
Cleaning of Tools	Clean all tools and application equipment with sealant remover / Sikasil® Cleaner immediately after use. Hardened / cured material can only be mechanically removed.

Notes on Application / Limits	Elastic sealants must not be over-painted! Sealant compatible coatings may cover the joint sides to max. 1 mm. The compatibility should be tested individually according to ASTM C1087. Sikasil® WS-355 is compatible with many cured silicone sealants. Where two or more different sealants are used, allow the first to cure completely before applying the next. Sikasil® WS-355 may not be used for structural glazing bonding. Use Sikasil® SG-18, Sikasil® SG-20 and Sikasil® SG-500 instead. Do not use Sikasil® WS-355 on pre-stressed polyacrylate and polycarbonate elements as it may cause environmental stress cracking (crazing). Light-coloured Sikasil® WS-355 should not be used on such substrates as neoprene or EPDM; as these may cause it to turn yellow. *Technical service:* Please contact your supplier for more details of available laboratory facilities, applications support and other technical services as well as comprehensive technical information and literature.

Health and Safety Information

Protective Measures	To avoid rare allergic reactions, we recommend the use of protective gloves. Change soiled work clothes and wash hands before breaks and after finishing work. Since Sikasil® WS-355 releases a volatile substance on curing, ensure good ventilation indoors. If this substance is inhaled in high concentrations over a long period of time, it can produce an allergic reaction. Local regulations as well as health and safety advice on packaging labels must be observed. Detailed health and safety information as well as detailed precautionary measures e.g. physical, toxicological and ecological data can be obtained from the safety data sheet.
Important Notes	All technical data stated in this Product Data Sheet are based on laboratory tests. Actual data may vary due to changing conditions beyond our control. Residues of material must be removed according to local regulations. Fully cured material can be disposed of as household waste under agreement with the responsible local authorities.

Legal Notes

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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