

Sikasil® WT-480

High-modulus adhesive for structural glass bonding of windows

Technical Product Data

Properties	Component A Sikasil® WT-480 A	Component B Sikasil® WT-480 B
Chemical base	2-part silicone	
Color (CQP ¹ 001-1)	white	black, grey
Color mixed	black, grey S6	
Cure mechanism	polycondensation	
Cure type	alkoxy	
Density (CQP 006-4)	1.4 kg/l approx.	1.1 kg/l approx.
Density mixed	1.37 kg/l approx.	
Mixing ratio	A : B by volume A : B by weight	10 : 1 13 : 1
Viscosity (CQP 029-6)	1'100 Pa·s approx.	250 Pa·s approx.
Consistency	paste	
Application temperature	5 - 40°C (40 - 105°F)	
Snap time ² (CQP 554-1)	35 min approx.	
Tack-free time ² (CQP 019-1)	180 min approx.	
Shore A-hardness (CQP 023-1 / ISO 868)	60 approx.	
Tensile strength (CQP 036-1 / ISO 527)	2.5 N/mm ² approx.	
Elongation at break (CQP 036-1 / ISO 527)	140% approx.	
100% modulus (CQP 036-1 / ISO 527)	2.0 N/mm ² approx.	
12.5% modulus ³ (CQP 036-1 / ISO 527)	0.5 N/mm ² approx.	
Movement accommodation capability (ASTM C 719)	±12.5%	
Thermal resistance (CQP 513-1)	180°C (355°F)	
Short term	4 hours 1 hour	190°C (375°F) 200°C (390°F)
Service temperature	-40 - 150°C (-40 - 300°F)	
Shelf life (storage below 25°C) (CQP 016-1)	15 months	12 months

¹CQP = Corporate Quality Procedure

²23°C (73°F) / 50% r.h.

³ For further values including design values see Calculation Value Sheet

Description

Sikasil® WT-480 is a high-modulus two-part silicone adhesive which builds up mechanical strength and adhesion within a short period of time.

Sikasil® WT-480 is manufactured in accordance with ISO 9001 / 14001 quality assurance system and the responsible care program.

Product Benefits

- Excellent adhesion to most relevant substrates
- Outstanding UV and weathering resistance
- Remains flexible over a wide temperature range
- Long-term durability
- Meets requirements of EOTA ETAG 002 and RAL-GZ 716/1

Areas of Application

Sikasil® WT-480 adheres well to glass, (coated) metal, wood, PVC and many other substrates. In combination with its good mechanical properties, especially the high modulus of elasticity, this makes the adhesive most suitable for structural bonding of insulating glass units into window frames. This product is only suitable for professional experienced users.



Tests with actual substrates and conditions have to be performed to ensure adhesion and material compatibility.

Cure Mechanism

Sikasil® WT-480 starts to cure immediately after mixing the two components.

The speed of the reaction depends mainly on the temperature: the higher the temperature the faster the curing speed.

Heating above 50°C is not advisable as it may lead to bubble formation.

Please note, that – especially when static mixers are used – the mixer open time, i.e. the time the material can remain in the mixer without flushing or product extrusion, is significantly shorter than the snap time indicated above. For more information please contact the Technical Service Department of Sika Industry.

Application Limits

Most Sikasil® WS, FS, SG, IG, WT, AS and other engineering silicone sealants manufactured by Sika are compatible with each other and with SikaGlaze® IG sealants. For specific information regarding compatibility between various Sikasil® and SikaGlaze® products please contact the Technical Service Department of Sika Industry. All other sealants have to be approved by Sika before using them in combination with Sikasil® WT-480. Where two or more different reactive sealants are used, allow the first to cure completely before applying the next.

Sikasil® SG, IG and WT sealants and adhesives may only be used in structural glazing or window bonding applications by experienced professionals and after a detailed examination and written approval of the corresponding project details by the Technical Service Department of Sika Industry.

The compatibility of gaskets, backer rods, setting blocks and other accessory materials with Sikasil® WT-480 should be tested in advance.

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 all traces of oil, grease and dust.

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

Application

Before processing of Sikasil® WT-480 both components have to be mixed homogeneously and air-bubble-free in the correct ratio as indicated before with an accuracy of ± 10 %. Most commercially available meter/mix equipment is suitable. Please contact the System Engineering of Sika Industry for specific advice.

While the A-part of Sikasil® WT-480 is stable in air, the B-part is moisture-sensitive and must only be exposed briefly to air.

Joints must be properly dimensioned as changes are no longer possible after construction. Basis for calculation of the necessary joint dimensions are the technical values of the adhesive and the adjacent building materials, the exposure of the building elements, their construction and size as well as external loads. For more information please contact the Technical Service Department of Sika Industry.

Tooling and finishing

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

Removal

Uncured Sikasil® WT-480 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 towels or a suitable industrial hand cleaner and water. Do not use solvents!

Overpainting

Sikasil® WT-480 cannot be over-painted.

Further Information

Copies of the following publications are available on request:

- Safety Data Sheets
- General Guidelines "Window Bonding with Sikasil® WT Adhesives"

Packaging Information

Twin line cartridge (comp. A + B)	490 ml
A-part: pail	25 kg
A-part: drum	260 kg
B-part: pail	20 kg

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 shall refer to the actual Safety Data Sheets containing physical, ecological, toxicological and other safety-related data.

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.

Further information available at:

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