BUILDING TRUST

PRODUCT DATA SHEET

Sikasil®-705 AP

Neutral cure silicone joint sealant for weatherproofing curtain wall, glass and metal cladding facades

DESCRIPTION

Sikasil®-705 AP is a neutral cure high-performance silicone sealant. It is used for weatherproofing and sealing applications where durability under severe conditions is required. It is particularly suited as a weather sealant for curtain wall and glass facades.

USES

Sikasil®-705 AP is used for sealing and waterproofing the following types of joints:
- Movement joints
- Connection joints

Sikasil®-705 AP is used for the following areas:
- Glass façades
- Curtain walling
- Metal cladding facades
- Rainscreen cladding
- Around window and door frames

FEATURES

- Easy to extrude and tool
- Very good resistance to weathering
- Movement capability of ± 50 % (ASTM C 719)
- Good adhesion to many construction materials
- Non-corrosive to metals
- Very good tear propagation resistance
- Extender free
- Solvent-free according to TRGS 610
- Non-streaking on glass and aluminum

CERTIFICATES AND TEST REPORTS

- Elastomeric joint sealants ASTM C920 - 18, Sikasil® - 705 AP, PRI, Test Report No. 1725T0027
- Structural Silicone Sealants ASTM C1184, Sikasil®-705 AP, PRI, Test Report No. 1725T0028
- Attestation LEED v4, v4.1 and v5 Sikasil®-705 AP

PRODUCT INFORMATION

Composition	Neutral cure oxime silicone	
Packaging	Refer to the current price list for available packaging variations. 280 ml catridge, 12 cartridges per box; 600 ml foil pack, 20 foil packs per box	
Colour	Black, white, concrete grey	
Shelf life	12 months from date of production	
Storage conditions	The Product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +30 °C. Always refer to the packaging. Refer to the current Safety Data Sheet for information on safe handling and storage.	
Density	1.4 kg/L	(ISO 1183-1)

Product declaration	▪ ASTM C920: Type S, Grade NS, Class 50, Use M, Use G, and Use A ▪ ASTM C1184 ▪ LEED v5

TECHNICAL INFORMATION

Shore A hardness	Cured 28 days at +23 °C and 50 % R.H.	35–45	(EN ISO 868)
Tensile strength	Cured 7 days at +23 °C and 50 % R.H.	2.3–2.7 MPa	(ISO 37)
Secant tensile modulus	Cured 28 days at +23 °C and 50 % R.H. Measured at 100 % elongation at +23 °C	0.6–0.8 N/mm²	(ISO 8339)
Tensile strain at break	> 500 %		(ISO 37)
Elastic recovery	Cured 28 days at +23 °C and 50 % R.H. Measured after 100 % elongation for 24 hours.	> 80 %	(EN ISO 7389)
Tear propagation resistance	Cured 7 days at +23 °C and 50 % R.H.	> 9.0 N/mm	(ISO 34-2)
Movement capability	± 50 %		(ASTM C719)
Service temperature	Maximum	+120 °C	
	Minimum	-40 °C	

APPLICATION INFORMATION

Backing material	Use closed cell, polyethylene foam backing rod.	
Ambient air temperature	Maximum	+40 °C
	Minimum	+5 °C
Substrate temperature	Maximum	+40 °C
	Minimum	+5 °C
	Beware of condensation. Substrate temperature during application must be at least +3 °C above dew point.	
Curing rate	At +23 °C and 50 % R.H.	> 2 mm / 24 hours (CQP049-2)
Skinning time	At +23 °C and 50 % R.H.	30–60 minutes (CQP019-1)

BASIS OF PRODUCT DATA

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.

FURTHER DOCUMENTATION

- Pre-treatment chart for construction sealants and adhesives
- Application manual - Joint Maintenance, Cleaning and Renovation

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

IMPORTANT

Poor adhesion due to incorrect priming procedure

Incorrectly defined or uncontrolled priming procedures may lead to a variation in Product performance.

1. Test adhesion on project-specific substrates and agree on procedures with all parties before full project application. For more information contact Sika Technical Services.

Poor adhesion due to inadequate surface preparation

Note: Primers are adhesion promoters. Primers cannot replace proper surface preparation and surface cleaning.

1. Do not use primers for improving poorly prepared or poorly cleaned joint surfaces.

The substrate must be sound, clean, dry and free of contaminants such as dirt, oil, grease, cement laitance, sealant residues and poorly bonded coatings which could affect adhesion of the primer and sealant.

The substrate must be of sufficient strength to withstand the stress induced by the sealant during movement.

1. Use techniques such as wire brushing, grinding, grit blasting or other suitable mechanical methods to remove all weak substrate material.
2. Repair all damaged joint edges with suitable Sika repair products.
3. Remove dust, loose and friable material from all surfaces before applying the sealant.

If tested or supported by experience, the Product can be used without primers or activators on many substrates.

Use the following priming or pre-treatment procedures to ensure optimum adhesion and joint durability, or if the Product is used for high-performance applications such as joints on multi-storey buildings, highly stressed joints, or joints exposed to extreme weather.

NON-POROUS SUBSTRATES

Aluminium, anodised aluminium, stainless steel, galvanised steel or glazed tiles.

1. Pretreat the surface with Sika® Aktivator-205 applied with a clean cloth.

Other metals, such as copper, brass and titanium-zinc

1. Lightly roughen the surface with a fine abrasive pad.
2. Clean the surface.
3. Pretreat the surface with Sika® Aktivator-205 applied with a clean cloth.
4. Wait until the flash-off time is over.
5. Prime the surface with Sika® Primer-3 N applied with a brush.

Powder-coated metals

1. Carry out preliminary trials to verify adhesion. For more information contact Sika Technical Services.

Glass

1. Clean the surface with Sika® Cleaner G+M

PVC substrates

1. Prime the surface with Sika® Primer-215 applied with a brush.

POROUS SUBSTRATES

Concrete, aerated concrete and cement based renders, mortars and bricks

1. IMPORTANT Avoid excessive application of primer to avoid causing puddles. Prime the surface with Sika® Primer-3 N or Sika® Primer-115 applied with a brush.

APPLICATION

IMPORTANT

Strictly follow installation procedures

Strictly follow installation procedures as defined in Method Statements, application manuals and working instructions which must always be adjusted to the actual site conditions.

IMPORTANT

Staining on natural stone substrates due to plasticiser migration

Staining from plasticiser migration may occur when used on cast, reconstituted or natural stone such as granite, marble or limestone substrates.

1. Do not use on natural stone substrates

IMPORTANT

Degradation of sealant due to substrates leaching oil, plasticisers, or solvents

Bitumen, natural rubber or EPDM rubber can leach oils, plasticisers, or solvents that can degrade the sealant and cause the Product to become tacky.

1. Do not use the Product on building materials which leach oils, plasticisers, or solvents.

IMPORTANT

Use on pre-stressed polyacrylate and polycarbonate

The substrate may suffer from environmental stress cracking or surface crazing.

1. Do not use on pre-stressed polyacrylate and polycarbonate substrates.

IMPORTANT

Degradation of sealant due to chemical attack

1. Do not use the Product to seal joints in and around swimming pools containing water treatment agents such as chlorine.

IMPORTANT

Insufficient curing due to exposure to alcohol

Exposure to alcohol during curing may interfere with the curing reaction and cause the Product to remain soft or become tacky.

1. Do not expose the Product to alcohol-containing products during the curing period.

IMPORTANT

Material failure due to insufficient air humidity

Air humidity is required for the Product to cure.

1. Do not use the Product in a totally confined space.

Delayed skin formation and curing time due to changing ambient conditions

Note: Changing ambient conditions can affect product performance. Skin formation and curing time can be significantly delayed by low humidity, low temperature and large joint dimensions.

1. Apply masking tape where neat or exact joint lines are required.
2. After the required substrate preparation, insert a backing rod to the required depth.
3. Prime the joint surfaces as recommended in substrate preparation. Note Avoid excessive application of the primer.
4. Open the seal on the top of the cartridge or open the end of the foil pack.
5. Fit the nozzle and cut it to the desired bead size.
6. Insert the Product into the application gun.
7. Apply the Product into the joint. Note Avoid air entrapment. Make sure that the Product comes into full contact with the adhesion area of the joint.
8. IMPORTANT Do not use tooling products containing solvents. As soon as possible after application, tool the Product firmly against the joint sides to ensure adequate adhesion and a smooth finish. Use a compatible tooling agent such as Sika® Tooling Agent N to smooth the joint surface.
9. Remove the masking tape within the skin formation time of the Product.

Colour variation

Note: Colour variation may occur especially with white or other light colour shades. This effect is purely aesthetic and does not adversely influence the technical performance or durability of the Product.

CLEANING OF EQUIPMENT

Clean all tools and application equipment immediately after use with Sika® Remover-208 or Sika® Cleaning Wipes-100. Once cured, hardened material can only be removed mechanically.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

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.

Sika (Thailand) Limited
700/37 Moo 5 Amata City Chonburi
Industrial Estate, T. Klong Tamhru
A. Muang, Chonburi 20000, Thailand
Tel : +66 3810 9500
E-mail : sikathai@th.sika.com
Website: tha.sika.com