

# PRODUCT DATA SHEET

## Sikasil®-701

### 1-PART SILICONE BASED WEATHERSEALANT

#### DESCRIPTION

Sikasil®-701 is a one-component neutral curing silicone weathersealant with good adhesion, weatherability and elasticity for weather sealing in curtain wall and building facades.

#### USES

Sikasil®-701 is used for movement and connection joints in building envelope such as curtain wall and metal cladding weather sealing applications.

#### CHARACTERISTICS / ADVANTAGES

- Neutral cure
- Very good resistance to weathering
- Good adhesion to most common building materials
- Movement capability  $\pm 35\%$  (ASTM C719)
- Very easy to apply

#### PRODUCT INFORMATION

Composition	Neutral cure silicone
Packaging	600 mL foil pack, 20 foil packs per box
Colour	Black, white and grey
Shelf life	12 months from the 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 +25 °C. Always refer to packaging.
Density	~1.40 kg/L

#### TECHNICAL INFORMATION

Shore A Hardness	After 28 days	~35	(ISO 868)
Secant Tensile Modulus	~0.65 N/mm <sup>2</sup>	(100 % elongation +23 °C)	(ISO 8339)
	~0.70 N/mm <sup>2</sup>	(100 % elongation -20 °C)	
Elongation at Break	~600 %		(ISO 37)
Elastic Recovery	~0.85 %		(ISO 37)
Tear Propagation Resistance	~14 N/mm		(ISO 34)
Movement Capability	$\pm 35\%$		(ASTM C719)
Service Temperature	-40 °C to +100 °C		

## Joint Design

The joint width must be designed to suit the joint movement required and the movement capability of the sealant. The joint width shall be  $\geq 6$  mm and  $\leq 45$  mm. The joint depth shall be  $\geq 6$  mm and  $\leq 15$  mm. A width to depth ratio of 2:1 must be maintained (for exceptions, see table below). Typical joint dimensions.

Joint Width (mm)	Joint Depth (mm)	Joint Length /600 ml ssg
6	4	25 m
9	5	13 m
12	6	8 m

All joints must be correctly designed and dimensioned in accordance with the relevant standards, before their construction. The basis for calculation of the necessary joint widths are the type of structure and its dimensions, the technical values of the adjacent building materials and the joint sealing material, as well as the specific exposure of the building and the joints. For larger joints please contact Sika technical service.

<b>Backing Material</b>	Use closed cell, polyethylene foam backing rods.
<b>Sag Flow</b>	Good
<b>Ambient Air Temperature</b>	+5 °C min./ +40 °C max.
<b>Substrate Temperature</b>	+5 °C min./ +40 °C max. Minimum +3 °C above dew point temperature.
<b>Curing Rate</b>	~3 mm/24 hour (+23 °C / 50 % r.h.)
<b>Skinning time</b>	~30 minutes (+23 °C / 50 % r.h.)

## APPLICATION INSTRUCTIONS

### SUBSTRATE PREPARATION

The substrate must be clean, dry, sound and free from oils, grease, dust, cement laitance and loose or friable particles. For optimum adhesion, joint durability and critical, high performance applications such as joints on multi-storey buildings, highly stressed joints, extreme weather exposure or water immersion / exposure. The following priming and/or pre-treatment procedures must be followed:

#### Non-porous substrates

Float glass, coated glass, anodised aluminium and stainless steel must be pre-treated using Sika® Aktivator-205, Sika® Aktivator-100 or Sika® Cleaner P. Powder coated and PVDF coated metals must be pre-treated using Sika® Aktivator-205. For more details such as application and flash-off times, refer to the most recent Product Data Sheet of the respective pre-treatment product.

#### Porous substrates

Concrete, aerated concrete and cement based renders, mortars and bricks must be primed using Sika® Primer-3 N or Sika® Primer-210. For more details such as application and flash-off times, refer to the most recent Product Data Sheet of the respective pre-treatment product. Adhesion tests on project specific substrates must be performed and procedures agreed with all parties before full project application. Contact Sika Technical Services for additional information. Note: Primers and activators are adhesion promoters and not an alternative to improve poor preparation / cleaning of the joint surface. Primers also improve the long term adhesion performance of the sealed joint.

### APPLICATION METHOD / TOOLS

#### Masking

It is recommended to use masking tape where neat or exact joint lines are required. Remove the tape within the skin time after finishing.

#### Joint Backing

After the required substrate preparation, insert a suitable backing rod to the required depth.

#### Priming

If required, prime the joint surfaces as recommended in substrate preparation. Avoid excessive application of primer to avoid causing puddles at the base of the joint.

#### Application

Sikasil®-701 is supplied ready to use. Prepare the end of the foil pack or cartridge, insert into the sealant gun and fit the nozzle. Extrude Sikasil®-701 into the joint ensuring that it comes into full contact with the sides of the joint and avoiding any air entrapment.

#### Finishing

As soon as possible after application, sealant must be firmly tooled against the joint sides to ensure adequate adhesion and a smooth finish. Use a compatible tooling agent (e.g. Sika® Tooling Agent N) to smooth the joint surface. Do not use tooling products containing solvents.

### CLEANING OF EQUIPMENT

Clean all tools and application equipment with Sika® Remover-208 immediately after use. Hardened material can only be removed mechanically. For cleaning skin, use Sika® Cleaning Wipes-100.

## FURTHER INFORMATION

- Safety Data Sheet (SDS)
- Pre-treatment Chart Sealing & Bonding
- General Guidelines SikaHyflex and Sikasil Weather Sealants

## IMPORTANT CONSIDERATIONS

- When applying sealant into a previously silicone sealed joint, ensure all residue is removed from joint.
- Colour variations may occur due to the exposure in service to chemicals, high temperatures and/or UV-radiation (especially with white colour shade). This effect is aesthetic and does not adversely influence the technical performance or durability of the product.
- Sikasil®-701 cannot be overpainted.
- Do not use on natural stone.
- Do not use on bituminous substrates, natural rubber or any building materials which might leach oils, plasticisers or solvents that could degrade the sealant. EPDM or other gaskets in direct contact with Sikasil®-701 have to be tested for compatibility prior to application. For specific advice contact Sika technical services.
- Do not use on pre-stressed polyacrylate and polycarbonate as it may cause environmental stress cracking (crazing).
- Do not use Sikasil®-701 in areas which are exposed to strong oxidising acids (e.g. nitric acid) and bases.
- Do not use to seal joints in or around swimming pools.
- Do not use for joints under water pressure or permanent water immersion.
- Do not use Sikasil®-701 in totally confined spaces as it requires atmospheric moisture to cure.
- Do not use for medical or pharmaceutical applications.

## BASIS OF PRODUCT DATA

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

## LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for the exact product data and uses.

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### Product Data Sheet

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## 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 Safety Data Sheet (SDS) 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.

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