BUILDING TRUST

PRODUCT DATA SHEET

SikaHyflex-305 KR

SILICONE JOINT SEALANT FOR WEATHERPROOFING CURTAIN WALL AND METAL CLADDING FACADES

DESCRIPTION

SikaHyflex-305 KR is a 1-part silicone based, moisture curing, low-modulus elastic joint sealant for weatherproofing curtain wall and metal cladding facades under severe conditions. The product provides good resistance to weathering with low VOC emissions, good workability and movement capability. For External use.

USES

- Joint sealant for weatherproofing curtain wall and metal cladding facades

CHARACTERISTICS / ADVANTAGES

- 1-part ready to use
- Good resistance to weathering
- Movement capability of ±50 % (ASTM C 719)
- Good workability
- Good adhesion to a wide range of substrates
- Neutral cure
- Suitable for use in most global conditions
- Low VOC emissions

ENVIRONMENTAL INFORMATION

- Conformity with LEED v4 EQc 2: Low-Emitting Materials

APPROVALS / STANDARDS

- Conformity with ASTM C920 - 14: Standard Specification for Elastomeric Joint Sealants.

PRODUCT INFORMATION

Chemical Base	Neutral cure silicone
Packaging	600 ml cylindrical foil pack:20 foil packs per box
Colour	Black, White and Grey
Shelf Life	Foil pack: 15 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	~1,45 kg/l
Product Declaration	ASTM C920 - 14: Type S, Grade NS, Class 50, Uses NT, G, A and M.

TECHNICAL INFORMATION

Shore A Hardness	~25 (after 28 d)	
Secant Tensile Modulus	~0,40 N/mm2 at 100 % elongation (23 °C) ~0,45 N/mm2 at 100 % elongation (−20°C)	(ISO 8339)
Elongation at Break	~750 %	(ISO 37)
Elastic Recovery	~75 %	(ISO 7389)
Tear Propagation Resistance	~4,0 N/mm	(ISO 34)
Movement Capability	±25 % ±50 %	(ISO 9047) (ASTM C 719)
Resistance to Weathering	10	(ISO / DIS 19862)
Service Temperature	−40 °C min. / +150 °C max.	

Joint Design

The joint width must be designed to suit the movement capability of the sealant. The joint width must be ≥ 6 mm and ≤ 45 mm. The joint depth must be ≥ 6 mm and ≤ 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]
10	6
15	8
20	10
30	15
45	15

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

SYSTEM INFORMATION

Compatibility

SikaHyflex-305 KR is compatible with most SikaHyflex and Sikasil® silicone weather sealants, Sikasil® SG adhesives and Sikasil® IG sealants. All other sealants and adhesives have to be approved by Sika before using them in direct contact with SikaHyflex-305 KR. Where two or more different reactive sealants and/or adhesives are used, allow the first one to cure completely before applying the next one. For specific information regarding compatibility contact Sika Technical Services.

APPLICATION INFORMATION

Consumption

Joint width [mm]	Joint depth [mm]	Joint length [m] per 600 ml foil pack
10	6	10
15	8	5
20	10	3
25	12	2
30	15	1.3

Backing Material	Use closed cell, polyethylene foam backing rod.
Sag Flow	~2 mm (20 mm profile, 50 °C)
Ambient Air Temperature	+5 °C min. / +40 °C max.
Substrate Temperature	+5 °C min. / +40 °C max., min. 3 °C above dew point temperature

Curing Rate	~3 mm / 24 hours (23 °C / 50 % r.h.)	(CQP 049-2)
Skin Time	~15 min	(CQP 019-1)
Tack Free Time	~60 min (23 °C / 50 % r.h.)	(CQP 019-1)

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

The substrate must be clean, dry, sound and homogeneous, free from oils, grease, dust and loose or friable particles.
For optimum adhesion and joint durability, the following substrate 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. For more detailed advice and instructions contact Sika Technical Services.
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.

MIXING

Ready to use product

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
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
SikaHyflex-305 KR is supplied ready to use.
Prepare the end of the foil pack or cartridge, insert into the sealant gun and fit the nozzle. Extrude SikaHyflex-305 KR 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 TOOLS

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

FURTHER DOCUMENTS

- Pre-treatment Sealing & Bonding Chart
- General Guidelines for SikaHyflex and Sikasil® Weather Sealants

LIMITATIONS

- SikaHyflex-305 KR cannot be overpainted.
- Protect the sealant after application for at least 24 hours.
- Colour variations may occur due to exposure to chemicals or other extreme external influences. This effect is aesthetic nature and does not adversely influence the technical performance or durability of the product.
- Do not use on natural stone.
- Do not use on bituminous substrates, natural rubber or any building materials which might bleed oils, plasticisers or solvents that could degrade the sealant. EPDM or other gaskets in direct contact with SikaHyflex-305 KR 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 to seal joints in and around swimming pools.
- Do not use for joints under water pressure or permanent water immersion.
- Do not expose uncured SikaHyflex-305 KR to alcohol containing products as this may interfere with the curing reaction.

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.

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.

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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