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National Technical Test Certificate

Test certificate number: **P 14174 / 25-743**

Subject: Products for sealings in combination with tiles and paving in accordance with the Hessian Administrative Regulation on Technical Building Regulations (H-VV TB) (edition August 2023), serial number C 3.27

SILIKAL® Kitchen System nach PG-AIV-N
as a sealing system in combination with wear layers

Applicant: **Silikal GmbH**
Ostring 23
63533 Mainhausen

Date of Issue: **02.01.2025**

Period of validity: **01.01.2030**

Due to this national technical test certificate which has been issued according to the regulations of the building supervisory authority, the above building product can be used in accordance with the building codes of the individual federal states.

This national technical test certificate comprises 9 pages, including
1 appendix with 1 page.

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A GENERAL REGULATIONS

(1) The usability of the construction product within the meaning of the state building regulations is verified with this general building authority test certificate.

(2) The general building inspection test certificate does not replace the approvals, consents and certificates required by law for the implementation of construction projects.

(3) The general building authority test certificate is issued without prejudice to the rights of third parties, in particular private property rights.

(4) Manufacturers and distributors of the construction product shall provide the user of the construction product with copies of the general building inspection test certificate and point out that the general building inspection test certificate must be available at the point of use, notwithstanding any further regulations in the “Special Provisions”. Copies of the general building inspection test certificate shall be made available to the authorities involved upon request.

(5) The general building authority test certificate may only be reproduced in full. Publication of extracts requires the consent of Kiwa GmbH Polymer Institut. Texts and drawings in advertising material must not contradict the general building inspection test certificate. Translations of the general building inspection test certificate must contain the note “Translation of the original German version not checked by Kiwa GmbH Polymer Institut”.

(6) The general building authority test certificate is issued on a revocable basis. The provisions may be subsequently supplemented and amended, in particular if new technical findings make this necessary.

B SPECIAL REGULATIONS

1 SUBJECT AND SCOPE OF APPLICATION

1.1 Subject

This National Technical Test Certificate applies to the building product

SILIKAL® Kitchen System nach PG-AIV-N

as a sealing system in conjunction with wear layers according to Hessian Administrative Regulation on Technical Building Regulations (H VV TB), edition August 2023, serial number C 3.27.

1.2 Scope of application

The scope of use refers to:

Exposure classifications A:
Directly exposed indoor wall and floor areas as well as outdoor wall and floor areas connected with buildings that are frequently, or for a longer time, exposed to process and cleaning water, such as walkways around swimming pools and showers (public or private). This conforms to the water exposure classes W2-I and W3-I according to DIN 18534-1 without exposure to chemicals.

Exposure classification B:
Wall and floor areas of indoor or outdoor vessels, such as swimming pools and drinking water tanks, that are directly exposed to fill-up water with drinking water properties, if they are directly connected with buildings, or border on buildings, up to a maximum filling level of a 6 m water column. This conforms to the water exposure class W2-B according to DIN 18535-1.

Exposure classification C:
Directly and indirectly exposed wall and floor areas in rooms that are frequently, or for a longer time, exposed to process and cleaning water, with the exposure to chemicals being limited. These places include, inter alia, commercial kitchens and laundries, if the exposure to chemicals there is expected to be limited. This conforms to water exposure class W3-I pursuant to DIN 18534-1 with exposure to chemicals.
An exception are rooms which must be assigned to facilities for handling water-endangering substances in accordance with § 62 of the German Water Resources Act (WHG).

2 REQUIREMENTS CONCERNING THE BUILDING PRODUCT

2.1 Composition, properties and parameters

2.1.1 Composition

The building product ***SILIKAL® Kitchen System nach PG-AIV-N,*** manufactured by Silikal GmbH, Mainhausen can be allocated to the following group of waterproofing materials:

Reactive Resins

Mixtures of synthetic resins and organic additives with or without mineral fillers, which are mixed immediately before processing. Curing occurs through a chemical reaction. All reactive resins are formulated on the basis of PMMA.

The applied sealing layer must have a minimum dry layer thickness of 2.0 mm.

Table 1: Construction floor

Function	System component
Primer	Silikal® RU 380
1st layer : Sealing layer	Silikal® RU 320 Pigmented
2nd layer: Sealing layer	Silikal® RU 320 Pigmented
Main layer	Silikal® R 61 HW with Silikal® Filler SL with Einstreuung Silikal® Füllstoff FM
1st Top coat	Silikal® R 82
2nd Top coat	Silikal® R 82

Hardener for the reactive resins is Silikal® BPO.

To be used additionally for floor-wall connections, corners and gullies:
- Tapes: Silikal® TEX
- Packings/collars: Silikal® TEX
- Silikal® TEX internal corner
- Silikal® TEX external corner

2.1.2 Eigenschaften

SILIKAL® Kitchen System nach PG-AIV-N has the following properties and is sufficient for the fields of application specified in sub-section 1.2 above

- adhesive on mineral substrates
- resistant against frost
- temperature and ageing resistant
- resistant against caustic potash solution
- resistant against lime water
- resistant against lactic acid (up to 5%), acetic acid (up to 5%) und hydrochloric acid (up to 3%)

It is:

- waterproof when installed up to 10 m water column
- crack-bridging for cracks in the substrate up to 0.2 mm

SILIKAL® Kitchen System nach PG-AIV-N fulfills the requirements for construction products of class Cfl-s1 according to DIN EN 13501-1 when installed. The test reports P000425133-01, P000425133-02 and P000425133-03 of Kiwa MPA Dresden GmbH are available.

The proof of usability was provided by tests according to the test principles with the test reports no. P 14174-1, P 11779 and P 3286 of Polymer Institut.

2.1.3 Characteristic values

The characteristic values of the product or of the product components are listed in the appendix.

2.2 Production, packing, transport, storage

2.2.1 Production

SILIKAL® Kitchen System nach PG-AIV-N or the product components are produced at the factory.

2.2.2 Packaging, transport, storage

The requirements of other legal areas noted on the containers, such as dangerous goods transport law or hazardous substances law, must be observed.
The construction product should be stored in closed containers dry and frost-free.

With regard to the minimum storage period, the manufacturer's instructions must be observed.

2.3 Labelling of the product and components

2.3.1 Mark of conformity (Ü mark)

The construction product, its packaging or the instruction leaflet must be marked by the manufacturer with the mark of conformity (Ü mark) in accordance with the respective national regulations on the mark of conformity of the counties. The mark may only be affixed if the requirements in Section 3 are met.

The Ü mark must contain the following information:

- Manufacturer and manufacturing plant
- Abbreviation of the technical rule applicable to the construction product
- Number of the National Technical Test Certificate and the name of the testing body

2.3.2 Additional information

The following information must be installed on the construction product, the packaging or the package insert:

- Batch number
- Date of manufacture and expiry date
- Intended use
- Fire behavior, Class C_{fl}-s1 according to DIN EN 13501-1
- Reference to the associated processing instructions

The product components must be labeled as belonging to the building product.

2.4 Installing and application

The following rules apply for the application:

The application of *Silikal® RU 320 Pigmented* is carried out in at least two layers. It must be applicated enough material so that a dry thickness layer does not fall below 2.0 mm (1,35 kg/mm).

Wall and floor connections, edges, pipe openings and drains are sealed with the products mentioned in chapter 2.1.1.

The reactive resin system has a crack bridging ability for cracks up to 0.2 mm. The compliance with the maximum crack width must be ensured with the construction design.

During installing ***SILIKAL® Kitchen System nach PG-AIV-N*** the application manuals of the manufacturer and the product information of each layer must be taken into account.

The consumption guide values of each layer can be taken from the following table.

Table 2: Consumption

System component	Product	Consumption
Primer	Silikal® RU 380	0.5 kg/m²
Membrane, each layer	Silikal® RU 320 Pigmented	1.35 kg/m²
Main layer	Silikal® R 61 HW und Silikal® Filler SL	6.8 kg/m²
Scattering	Silikal® Füllstoff FM	about 4.0 kg/m² (in excess)
Sealing, each layer	Silikal® R 82	0.4 kg/m²

The mixing ratios for the materials depending on the application temperature is given in the following table.

Table 3: Mixing ratio depending on the application temperature

Product	Silikal® BPO % by weight			
	0°C	+10°C	+20°C	+30°C
Silikal® RU 380	3,0	2,0	1,5	1,0
Silikal® RU 320 Pigmented	6,0	4,0	2,0	1,0
Silikal® R 61 HW	6,0	4,0	3,0	2,0
Silikal® R 82	3,0 (5°C)	3,0	2,0	1,0

First stir well and only then add SILIKAL® BPO until completely dissolved (approx. 1 minute) and use the mixture immediately.

3 ASSESSMENT OF CONFORMITY

3.1 General

According to Hessian Administrative Regulation on Technical Building Regulations (H VV TB), edition August 2023, serial number C 3.27, the compliance of the building product with the requirements of this National Technical Test Certificate that has been issued according to the regulations of the building supervisory authority shall be proved by a declaration of compliance issued by the manufacturer on the basis of an in-company production control (WPK) and after the examination of the building product by an agency recognized by the building supervisory authority before the compliance is confirmed (initial test).

3.2 Initial test (IT)

The initial test is carried out according to the test program „Test principles for waterproofing materials connected with tile and slab coverings, part 1: Liquid applied waterproofing materials" and part 4: "Supplementary tests on the waterproofing systems in combination with wear layers" for reactive resins.

3.3 Factory production control (FPC)

A factory production control system must be set up and carried out at the manufacturing plant in accordance with DIN 18200.
The factory production control includes the tests for reactive resins listed in Table 3 of the test principles for liquid applied waterproofing in combination with tile and slab coverings. The test values may not deviate from the characteristic values by more than the tolerances specified in Table 4 of the test principles. During ongoing production, the test must be carried out at least once a week, otherwise once per batch.
If the test grid is based on special production processes or batch sizes, it must be ensured that the uniformity of the product composition is subject to the same level of control. The results of the factory production control must be recorded, evaluated and kept for at least five years.

4 LEGAL BASIS

This National Technical Test Certificate that is issued according to the regulations of the building supervisory authority is awarded pursuant to Article 22 of the Hessian Building Regulation (HBO) dated 28.05.2018, last modified July 2023 in combination with Hessian Administrative Regulation on Technical Building Regulations (H VV TB), edition August 2023, serial number C 3.27.

5 LEGAL REMEDY INSTRUCTION

An objection to this National Technical Test Certificate is permissible. The objection must be submitted to Kiwa GmbH, Polymer Institut, Quellenstraße 3, 65439 Flörsheim-Wicker, Germany, in writing or for recording within one month of receipt of this National Technical Test Certificate. The date of receipt by Kiwa GmbH, Polymer Institut is decisive for the timeliness of the objection.

Flörsheim-Wicker, 02.01.2025

Nicole Machill

- Digitally signed | see http://ca.kiwa-deutschland.de for more details -

Dipl.-Ing. (FH) N. Machill
Head of test center

Kiwa Polymer Institut
kiwa

Appendix

Characteristic values for the proof of conformity / for the factory production control:

Characteristic value ***Material***	***SILIKAL® Kitchen System nach PG-AIV-N***		
Density *Silikal® RU* 380 *Silikal® RU 320 Pigmented*	g/cm³	1,00 1,17	± 3 % relativ
Viscosity (500 s^{-1}) *Silikal® RU* 380 *Silikal® RU 320 Pigmented*	mPa s	240 1020	± 20 % relativ
Infrared-Spectrum *Silikal® RU* 380 *Silikal® RU 320 Pigmented*	-	Spectra are stored	consistent
solid content *Silikal® RU* 380 *Silikal® RU 320 Pigmented*	%	95,4 98,3	± 3 % absolut
Ash content (550°C) *Silikal® RU* 380 *Silikal® RU 320 Pigmented*	%	0 0	± 3 % relativ