VERKEHRSWEGEBAU

National Technical Approval

Notified body:	**LGA Bautechnik GmbH** **Tillystraße 2** **90431 Nürnberg**
Certificate Number:	**P-21V80006 LGA**
Test unit (Building product, Type)	STEULER SEALING SYSTEM
Corresponding with	n.c. No. C 3.27 VV-TB Rhineland-Palatinate – Version 2019/11 Building product „STEULER SEALING SYSTEM" as sealer in conjunction for tiles
Applicant	STEULER – KCH GmbH Berggarten 1 56427 Siershahn
Date of issue	13 March, 2021
Valid until	12 March, 2026

Should the content of the test report need any interpretation the German text shall be leading.

This general building inspection test certificate comprises 8 pages and 1 attachment.

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Ein Unternehmen der
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www.lga.de

A General information

The usability of the aforementioned building product has been verified on basis of this National Technical Approval in the sense of the provisions of the Building Regulations of the Federal States of Germany.

The National Technical Approval does not replace the legal authorizations, approvals and consents that are necessary for the realization of building projects.
The National Technical Approval shall be granted without prejudice to the right of a third party, in particular of individual protective rights.

Manufacturers and distributors of the building project shall hand over copies of this National Technical Approval to the user and point out that the National Technical Approval must be available at the location or site of usage without prejudice to more extensive and precise laws given in the „ Special Provisions".
The National Technical Approval shall be submitted in copies to competent authorities involved in the building project if so requested.

The National Technical Approval may only be reproduced in full.
A publication in excerpts requires the prior consent of the LGA Bautechnik GmbH. Texts and drawings, illustrations, etc. of advertising material shall not be contradictory to the National Technical Approval.
Translations of the National Technical Approval shall bear the note – „Not authorized translation - translation was not reviewed by the Testing Laboratory (LGA Bautechnik GmbH)".

The right of use of the National Technical Approval is revocable. The provisions of the National Technical Approval may be changed or amended at any time, in particular if scientific or technical developments require it.

B Special provisions:

1 Issue of this National Technical Approval and scope of usability-/ applicability.

The present National Technical Approval covers the „STEULER SEALING SYSTEM" as sealant in conjunction with tile compliant to the building products as listed in the VV-TB Rhineland-Palatinate – version 2019/11, n.c. No. C 3.27 and may be applied by using reactive resins as mortar/adhesives.

The scope of applicability refers to:

Resistance class A1/A2 (direct contact to wall surfaces (A1) and ground/floor surfaces (A2) indoor where processing- and washing water is used frequently or for a long time, for example, water corridors around swimming pools, showers (public or private).

Resistance class B (wall- and ground floor surfaces of pools (indoor/outdoor) and drinking water tanks filled with water of drinking water quality

as well as

Resistance class C (wall- and ground surfaces indoor with limited chemical impact. (test media- equipment in accordance with § 3.3.3 – Test Principles (version 08/2012).
Does not refer to facilities where water-endangering substances/materials in the sense of the Water Resources Act § 19g WHG are available.)

The product „STEULER SEALING SYSTEM" may be applied as building sealer in conjunction with tile - as far as they are used together with the components as described in item 2.1.

2 Classification of the building product

2.1 Composite, parameters and properties

2.1.1 Mixture

The product „STEULER SEALING SYSTEM" manufactured by company STEULER-KCH GmbH shall be assigned to the group of the "sheet waterproofing materials".

Reactive resins are mixtures of synthetic resins and organic additives enriched with or with no mineral fillers. The cure occurs on chemical reaction.

The „STEULER SEALING SYSTEM" is composed oft the following components:

- Alkadur-HR-Solution
- Alkadur-HR-Hardener
- Oxydur-WV-Powder
- SKC-Filler 3L
- SKC-Filler 15
- SKC-Filler 12
- SKC-Filler 16
- KCH-EP-Solution 4
- KCH-EP-Hardener 2
- Alkadur-HR-Top-Coat-Solution
- Alkadur-SB-Solution 1
- Alkadur-SB-Solution 2
- Alkadur-SB-WE-Powder
- PE-Fibre 920 T

The following system is applied:

- Alkadur HR Primer
- Alkadur HR Filling (optional Filling electrically conductive)
- Alkadur HR Sealing Layer
- Alkadur HR Primer, sprinkled
- Alkadur Bedding Mortar
  - alternate 1: Keranol EP 211 Bedding Mortar
  - alternate 2: Alkadur SB Bedding Mortar
- Alkadur SB Jointing Mortar

2.1.2 Parameters

For the technical parameters of the product see attachment 1 as well as item 3.3.

2.1.3 Properties

The building sealer manufactured from the aforementioned elements provides the following properties:

The product proved to be sufficient for the applications as listed under item 1:

- stable,
- accurate dimensions,
- resistant to impact load,
- pull-off strength (dry/wet),
- resistant to frost
- resistant to temperature- and ageing
- resistant to weathering,
- resistant to potash lye and salt solution 20%,
- watertight
- resistant to chemicals / test using test media in accordance with § 3.5.7. Test Criteria to obtain the National Technical Approval for sealants in conjunction with tiles part 1: liquid binding sealants PG – AIV-F (version: June 2010)
- reversible crack-bridging as well as
- watertight for installation height up to 10 m

The product satisfies the requirements for building product class B2 (DIN 4102-1).

Furthermore, the following single components can be mounted / installed:

- Inflow, bronze, with clamping flange
- Floor drainage, PVC, with clamping flange
- Underwater spotlights, stainless steel, with clamping flange
- Fixture, stainless steel, with bonding flange
- Inflow, PVC, with bonding flange
- Floor drainage, PE, with clamping flange

The suitability proof was supplied by carrying out relevant tests. Furthermore, the components of the „STEULER SEALING SYSTEM" are subject to third party control within the scope of type approval Z-59.16-268.

2.2 Manufacture, packaging, transport, storage and marking

The single components of the system „STEULER SEALING SYSTEM" are factory-made.

The single coating materials have to be stored dry and without risk of frost in closed packs.

The information printed on such closed packs indicating requirements of other fields of applicable laws (for example, Directives on Hazardous Substances, Transport Regulations) shall be observed.

The packs must be provided with the number which is printed on page 1 of this National Technical Approval as well as with the name of the supplier (=applicant).
The date of expiry (the date up to which the use of the sealant continues to fulfil its initial function) must be marked clearly and visibly (no codes) on the pack.

The following information must be printed in addition on the building product, on the packaging of the building product or in the inserted instruction leaflet:

- Product name
- Date of manufacture and expiry date
- Intended use and resistance class
- Information on the processing instructions

2.3 German mark of conformity – the Ü mark

The manufacturers are obliged to mark every construction product with the conformity mark "Ü" compliant to the regulations of the German Laender on the conformity mark "Ü" (in Bavaria: Ordinance on Building Regulations for Building Products and Types – BauPAV). The Ü mark and the information required in combination with the Ü mark must be printed on the building product, on the inserted instruction sheet or on the product's packaging. Should this involve any problems the delivery slip or any attachment or enclosure of the delivery slip must bear the Ü mark and the aforementioned required information.

3 Assessment of conformity for construction products

3.1 General

In accordance with VV-TB Rhineland-Palatinate– version 2019/11, n.c. No. C 3.27 the assessment of conformity "ÜHP" is required.

The assessment of conformity to confirm compliance with the provisions of the National Technical Approval is necessary for every manufacturing company. The manufacturer must submit the assessment of conformity declaration according to 3.4 on basis of an in-house production control and an initial inspection of the building product compliant to the following provisions:

3.2 Initial test

For the initial test the manufacturer of the building product must commission a testing laboratory which is accredited for the relevant product. Within the scope of the initial test the parameters following clause 2.1.2 (attachment 1) must be evaluated. The values determined under test may deviate at the maximum from the tolerance permitted for the reference values. If the production changes the initial test must be renewed.

3.3 Internal (in-house) production control - FPC

In every manufacturing company an in-house factory production control (FPC) compliant to standard DIN 18200 must be established – and conducted. Internal production control is the continual monitoring of the production carried out by the manufacturer thus ensuring that the products/types manufactured by him correspond with National Technical Approval.

The FPC shall be conducted considering the VV-TB Rhineland-Palatinate (current version). The FPC requires the following tests and evaluations. The test values may deviate from the parameters to the maximum allowable tolerances as given in the table below.

Within the scope of FPC at the minimum the following tests must be conducted by taking random samples out of the production:

Property	Test conditions	FPC	Tolerances
Density	According to National Technical Approval Z-59.16-268	Every batch	± 3 %
Dynamic viscosity		Every batch	± 20 %
Pot life		Every batch	± 15 %

Sealing tapes, collar seals and fabric inlays: the identification tests as follows must be carried out.

The STEULERBUTYL V 10 S Rubber Membrane from the STEULER Q^7 SYSTEM can be used to seal built-in parts.

The results of the FPC must be recorded, validated and must be retained for at least 5 years. Submittal on request of the testing laboratory in the event of changes or extensions of the National Technical Approval Certificate - or to the competent building authorities.

The reported results shall include at least the following information:

- Name of the building product
- Type of control
- Date of the manufacture of the building product and date of control
- Results of the control and in so far as applicable – the results must be compared with the official requirements
- Signature of the person responsible for FPC

Should the inspection reveal nonconformities the manufacturer must immediately take necessary actions to correct the defect. Defective products must be separated. It must be ensured that building products which do not comply with the requirements were not marked with the mark Ü for conformity and that conforming products cannot be mixed up with those which are non-conforming. After the correction the control inspection must be repeated as far the repeated control is technically feasible and necessary to evidence the correction. During production time the inspection must be carried out at least once a week. In case the test grid is adapted to specific production processes or batch sizes it must be ensured the uniformity / consistence of the production entity equally is controlled.

3.4 Declaration of conformity

To confirm the conformity of the building product with the provisions of the present General Building Approval the manufacturer must submit a Declaration of Conformity where the basis is the successful initial test and the FPC – Factory Production Control compliant to clause 3.2 and 3.3. The Declaration of Conformity must be supplied by the manufacturer by marking the building product with the Conformity Mark (Ü mark) according to 2.3.

4 Criteria for design and design values

After the surface protection system is applied cracks in the sub-surface shall not widen more than 0.2 mm.

5. Instructions for the application

The product „STEULER SEALING SYSTEM" is applied in two layers. The minimum dry layer thickness is 2.0 mm.

When working with the product „STEULER SEALING SYSTEM" the instructions of the manufacturer must be observed No. TI 607 of 25.03.2021 (attachment 1).

6. Instructions for usage, repair and maintenance

For damage repair or before a new layer is applied only the same surface protection substances shall be used or substances that are compatible with the existing surface protection.

7 Legal basis

The present National Technical Approval shall be granted in virtue of § 20 of the regional Building Regulation of the Land Rheinland-Pfalz (version: 24.11.1998 / 03.02.2021) VV-TB Rhineland-Palatinate – version 2019/11, n.c. No. C 3.27.

8 Instruction on right to appeal – legal appeal

Recourse to Law against such order is permitted corresponding with the regulations of the Land where the applicant is located.
In the event of an objection the notification hereto must be submitted within one month upon receipt of this Approval in writing or declared for recording to LGA Bautechnik GmbH, Tillystraße 2, 90431 Nürnberg. Decisive for the complaint being lodged is the date of receipt in the LGA Bautechnik GmbH, Tillystraße 2, 90431 Nürnberg.

Nürnberg, 25 March, 2021

LGA Bautechnik GmbH
Verkehrswegebau

Dipl.-Ing. Holger Wöhler
Director of Testing Laboratory

STEULER Pool | Linings

TI 607

Technical Information Pool Linings
Issue 25.03.2021

STEULER SEALING SYSTEM

A sophisticated and proven sealing for thermal, leisure, hotel and private swimming pools, indoor and outdoor.

Properties

The main areas of application are pool surrounds, showers, sanitary facilities and sauna landscapes. The ALKADUR HR (epoxy resin) sealing system used has the national technical approval Z-59.16-268.

The Alkadur SB jointing mortar used for ceramic tiles, small mosaics and brick materials meets the requirements of the KTW recommendation, KSW recommendation and DVWG technical rules, worksheet W 270.

System Design

- Alkadur HR Primer
- Alkadur HR Filling
- *Alternative:* Alkadur HR Filling electrically conductive
- Alkadur HR Sealing Layer
  - Alkadur HR Top Coat floor
  - Alkadur HR Top Coat wall (with PE-fibres)
- Alkadur HR Primer, sprinkled
- Cladding (tiles, small mosaics or stone materials)
  - Alkadur Bedding Mortar and Alkadur SB Jointing Mortar
  - *Alternative 1:* Keranol EP 211 Bedding Mortar and Alkadur SB Jointing Mortar
  - *Alternative 2:* Alkadur SB Bedding Mortar und Alkadur SB Jointing Mortar

Substrate

Requirements

Processing temperature	approx. 10–30 °C
Dew point distance	> 3 K
Dew point distance from 70% air humidity	> 5 K

Optimal temperature is 20 °C. Higher and lower temperatures influence the pot life and consistency of the mixtures.

Avoid draughts and solar radiation.

Concrete / screed

Refer to DIN EN 14879-1 as well as to STEULER-KCH-Formsheet 010.

To achieve sufficient adhesive tensile strength, the substrate must generally be pre-treated in such a way that it is free of cement slurry, cement skin, loose and friable parts, structural defects and separating substances.
The residual moisture of cementitious substrates must not exceed 4 %.

The condition of the substrate must be documented by STEULER-KCH-Test-Record 006 (concrete) or STEULER-KCH-Test-Record 007 (screed).

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Steel

Refer to DIN EN14879-1 as well as to STEULER-KCH-Formsheet 020 and 030.

The steel surface is to be blasted to a metallic bright finish. The degree of preparation SA 2½ according to DIN EN ISO 12944-4 and the roughness grade "Medium (G)" according to DIN EN ISO 8503-1 must be achieved; minimum roughness depth R_z = 70 µm. After blasting, the formation of new rust must be prevented by suitable measures, such as priming directly.

The condition of the substrate must be documented by STEULER-KCH-Test-Record 003 (Steel) resp. STEULER-KCH-Test-Record 004 (Inspection of Grit Blasting Works).

Moisture

During application, the substrate must be kept dry. No moisture (condensate, mist, etc.) must get onto the material.

Working Equipment

Measuring cup, balance, mixing vessels, drilling machine, mortar whisk

Paint roller, brush

Surface scraper, smoothing trowel, nailed boots, spike roller

Mortar mixing machine, brick trowel, tooth trowel, joint trowel, jointing injector, rubber grouting float

Packaging / Shelf life

All components must be stored and transported dry. The minimum shelf life applies to a storage temperature of 20 °C, unless otherwise specified. Higher temperatures reduce, lower temperatures increase the minimum shelf life.

Component	Item number	Package	Content	Shelf life
Alkadur-HR-Solution	5035197020	Hobbock	16 kg	24 Months
Alkadur-HR-Hardener	5035198085	Drum	8.8 kg	24 Months
Alkadur-HR-Top-Coat-Solution RAL7030*	5035191002	Hobbock	20 kg	24 Months
Alkadur-HR-Top-Coat-Solution RAL7032*	5035193002	Hobbock	20 kg	24 Months
Oxydur-WV-Powder	5011119002	Bag	20 kg	24 Months
SKC-Filler 3L	5011194017	Bag	12.5 kg	24 Months
SKC-Filler 12	5011199001	Bag	25 kg	24 Months
SKC-Filler 15	5011202001	Bag	25 kg	24 Months
SKC-Filler 16	5011203001	Bag	25 kg	24 Months
PE-Fibre 920T	5019028007	Drum	1 kg	24 Months
Diluent EN	5060005005	Canister	4 kg	24 Months
KCH-EP-Solution 4	5035008002	Hobbock	20 kg	24 Months
KCH-EP-Hardener 2	5035210002	Hobbock	20 kg	24 Months
Alkadur-SB-Solution 1 off-white*	5035238058	Drum	2.4 kg	24 Months
Alkadur-SB-Solution 1 off-white*	5035238013	Hobbock	24 kg	24 Months
Alkadur-SB-Solution 2	5035244116	Bottle	0.7 kg	24 Months
Alkadur-SB-Solution 2	5035244049	Drum	7 kg	24 Months
Alkadur-SB-WE-Powder	5011013001	Bag	25 kg	24 Months
Steuler-Cleaner B	5040019003	Drum	5 kg	24 Months

* Other colours on request.

For handling, transport and storage observe the relevant safety data sheets.

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Application

- Application may only be started when the conditions specified in the chapter "Substrate" have been met. Component, ambient temperature and air humidity must be permanently monitored and documented.
- If the materials cannot be processed at optimum processing temperatures of approx. 10-30 °C, they must be cooled or heated to 20 °C.

Mixing sequence

1. Liquid components are measured or weighed accordingly and transferred to a mixing vessel or presented in pre-dosed containers and then carefully stirred. Do not use metal mixing vessels (colour change due to abrasion possible)!
2. The materials are mixed in a mixing vessel with a drilling machine and mortar whisk at 300-500 rpm. Lead the whisk alongside wall and bottom of the vessel until a homogeneous mixture is obtained.
3. Solids are individually measured or weighed, added to the solution in portions and stirred in as described until a lump-free mixture is formed.

Bedding- and jointing mortar are mixed with different powders.

Alkadur HR Primer

Apply with brush or roller. No puddles must remain in concrete recesses or in expansion joints.

Alkadur HR Primer

Component	kg/m²	Part by weight	kg / batch	l / batch
Alkadur-HR-Solution	0.161	1.8	1.800	1.600
Alkadur-HR-Hardener	0.089	1.0	1.000	1.000
Total	**0.250**		**2.800**	
When using Alkadur HR Filling electrically conductive, the primer must be sprinkled with approx. 0.5 kg/m² SKC-Filler 15.				

Total consumption in kg/m² (approx.): 0.250 Batch yields in m² (approx.): 11.2

Alkadur HR Filling

Scratch filling over ground using a smoothing trowel. Avoid trowel marks and burrs.

Alkadur HR Filling

Component	kg/l	Part by weight	kg / batch	l / batch
Alkadur-HR-Solution	0.382	1.8	1.800	1.600
Alkadur-HR-Hardener	0.212	1.0	1.000	1.000
SKC-Filler 12	0.956	4.5	4.500	3.500
PE-Fibre 920T (for wall surfaces)	(0.003)	(0.030)	(0.030)	(0.900)
Total	**1.550 (1.553)**		**7.300 (7.330)**	

Consumption per mm thickness in kg/m² (approx.): 1.550 Work steps: 1

Layer thickness in mm (approx.): variabel Batch yields per mm thickness in m² (approx.): 4.7

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Alternative: Alkadur HR Filling electrically conductive

Before the conductive filling is applied, a flexible copper strip must be installed every 50 m² – however, at least at two points. The copper strip should protrude approx. 10 cm into the coating, the other end should lead to grounding.

The electrically conductive filling is applied to the sanded Alkadur HR Primer in the desired thickness using a smoothing trowel. Avoid trowel marks and burrs or grind down afterwards. The filling is used for levelling and smoothing the surface and is necessary for the leak test of the subsequent sealing layer.

Alkadur HR Filling electrically conductive

Component	kg/m²	Part by weight	kg / batch	l / batch
Alkadur-HR-Solution	0.183	1.8	1.800	1.600
Alkadur-HR-Hardener	0.102	1.0	1.000	1.000
SKC-Filler 3L	0.265	2.6	2.600	3.100
Diluent EN*	(0.004)	(0.036)	(0.036)	(0.046)
PE-Fibre 920T (for wall surfaces)	(0.003)	(0.030)	(0.030)	(0.900)
Total	**0.550 (0.557)**		**5.400 (5.466)**	
* If necessary, especially at temperatures below 15 °C.				

Total consumption in kg/m² (approx.):	0.550	Work steps:	1
Layer thickness in mm (approx.):	0.5	Batch yields in m² (approx.):	9.9

Alkadur HR Sealing Layer

The Alkadur HR sealing layer with national technical approval (Z-59.16-268) is the sealing layer in this swimming pool sealing system.

Alkadur HR Top Coat floor

Apply Alkadur HR Top Coat floor on the filled surface using a surface scraper.

Component	kg/m²	Part by weight	kg / batch	l / batch
Alkadur-HR-Top-Coat-Solution	1.596	2.3	20.000**	17.40
Alkadur-HR-Hardener	0.704	1.0	8.800**	8.80
PE-Fibre 920T *(only on slopes > 2 %!)*	(0.012)		(0.150)	(5.00)
Total	**2.300**		**28.800**	

Total consumption in kg/m² (approx.):	2.300	Work steps:	1
Layer thickness in mm (approx.):	2.0	Batch yields in m² (approx.):	12.5
Floor distance surface scraper in mm:	2.5–3.0		

** pre-dosed package.

For slopes > 2 % or at higher temperatures add per batch extra approx. 0.5 % PE-Fiber 920T.

Then level and ventilate the surface with the spiked roller (wear nailed boots). After de-aeration, the surface must no longer be machined!

Alkadur HR Top Coat wall

Apply Alkadur HR Top Coat wall in two work steps with each 1.5 mm thickness using a smoothing trowel. It is absolutely necessary to control the consumption continuously.

Component	kg/m²	Part by weight	kg / batch	l / batch
Alkadur-HR-Top-Coat-Solution	2.200	2.3	4.000	3.48
Alkadur-HR-Hardener	0.968	1.0	1.760	1.76
PE-Fibre 920T	0.132	0.14	0.240	8.00
Total	**3.300**		**6.000**	

Total consumption in kg/m² (approx.):	3.300	Work steps:	2
Layer thickness in mm (approx.):	2 x 1.5	Batch yields in m² (approx.):	3.6 per work step

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Alkadur HR Primer, sprinkled

Apply Alkadur HR Primer to the hardened sealing layer.

Apply with brush or roller. No puddles must remain in concrete recesses or in expansion joints.

SKC-Filler 16 is sprinkled into the fresh primer to cover it. Remove excess material after hardening.

Total consumption in kg/m² (approx.): 0.250 Work steps: 1

Sprinkling in kg/m² (approx.): 2.0

Bedding and Jointing Mortar

Alkadur Bedding Mortar

The Alkadur Bedding Mortar (epoxy resin) is used for bedding ceramic tiles, small mosaics and stone materials.

Component	kg / liter	Part by weight	kg / batch	l / batch
Alkadur-HR-Solution	0.393	1.8	1.800	1.600
Alkadur-HR-Hardener	0.218	1.0	1.000	1.000
Oxydur-WV-Powder	0.825	3.78	3.780	4.700
PE-Fibre 920T	0.014	0.063	0.063	1.900
Total	1.450		**6.643**	
10 % must be added to the calculated project requirement as a reserve.				

Consumption per mm thickness in kg/m² (approx.): 1.450 Batch yields in l (approx.): 4.6

1 liter material spread over 1 m² is always 1 mm thick.

Alternative 1: Keranol EP 211 Bedding Mortar

The Keranol EP 211 Bedding Mortar (epoxy resin) is used for bedding ceramic tiles, small mosaics and stone materials.

Component	kg / liter	Part by weight	kg / batch	l / batch
KCH-EP-Solution 4	0.427	1.000	5.000	4.550
KCH-EP-Hardener 2	0.162	0.380	1.900	2.000
Oxydur-WV-Powder	0.961	2,250	11.250	14.000
Total	**1.550**	**3.630**	**18.150**	
10 % must be added to the calculated project requirement as a reserve.				

Consumption per mm thickness in kg/m² (approx.): 1.550 Batch yields in l (approx.): 11.7

1 liter material spread over 1 m² is always 1 mm thick.

Alternative 2: Alkadur SB Bedding Mortar

The Alkadur SB Bedding Mortar (epoxy resin) is used for bedding ceramic tiles, small mosaics and stone materials.

Component	kg / liter	Part by weight	kg / batch	l / batch
Alkadur-SB-Solution 1	0.468	1.000	2.400**	1.900
Alkadur-SB-Solution 2	0.137	0.292	0.700**	0.700
Oxydur-WV-Powder	0.975	2.083	5.000	6.400
Total	**1.580**		**8.100**	
10 % must be added to the calculated project requirement as a reserve.				

** pre-dosed package.

Consumption per mm thickness in kg/m² (approx.): 1.580 Batch yields in l (approx.): 5.1

1 liter material spread over 1 m² is always 1 mm thick.

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Alkadur SB Jointing Mortar

Alkadur SB Jointing Mortar (epoxy resin) is a chemically and mechanically highly stressable jointing compound. The mortar is used for jointing ceramic tiles, small mosaics and stone materials.

Component	kg / liter	Part by weight	kg / batch	l / batch
Alkadur-SB-Solution 1	0.311	1.000	2.400**	1.900
Alkadur-SB-Solution 2	0.091	0.292	0.700**	0.700
Alkadur-SB-WE-Powder	1.298	4.167	10.000	7.100
Total	**1.700**		**13.100**	
Steuler-Cleaner B (Cleaning immediately after jointing)		100 ml (110 g) Steuler-Cleaner B to 10 l warm water.		
10 % must be added to the calculated project requirement as a reserve.				

** pre-dosed package.

Consumption per litre (approx.): 1.700 Batch yields in l (approx.): 7.7

Application

Wash the mortar into the joints and press it with the rubber grouting float into the joints without cavities. Thinly smooth diagonally to the joint direction.

Alternatively, application with a jointing injector is possible. Work the mortar into the dry and clean joint. Cut the tip of the jointing injector so that it fits into the joint and can be filled from below. To compact the joint, press excess material over the edge of the joint with the joint trowel and then remove the remains with a brick trowel.

For bigger areas we recommend the use of a multipurpose machine with jointing disc (such as Schwamborn type STR 581 with continuous speed adjustment).

The tile lining has to be cleaned **within 20 minutes (at 20 °C)**. The surface is pre-washed with a cleaning pad and a little cleaning mixture with circular movements (100 ml or 110 g Steuler-Cleaner-B to 10 litres of warm water). Rinse sponge frequently.

NOTE! Do not use an acidic cleaner, such as Emused Fliesenclean, to wash off the fresh joint! The joints may only be washed with it after 24 hours.

The remaining slurry is removed with a soft sponge and unpolluted cleaning mixture. No washing water must get into unfilled joints.

Check cleaned surfaces for residues after drying. Mortar residues can still be removed for several hours with a soft sponge moistened with the cleaning mixture.

Pot Life

Alkadur HR

Pot life depends on temperature:

Temperature	Pot life
10 °C	approx. 70 minutes
20 °C	approx. 30 minutes
30 °C	approx. 20 minutes

Keranol EP 211

Temperature	Pot life
10 °C	approx. 120 minutes
20 °C	approx. 90 minutes
30 °C	approx. 55 minutes

Alkadur SB Bedding and Jointing Mortar

Temperature	Pot life
10 °C	approx. 90 minutes
20 °C	approx. 60 minutes
30 °C	approx. 30 minutes

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Waiting and curing times

The minimum waiting time until further processing and the maximum waiting time between work steps are as follows (approx.):

Temperature	Walkable after	Maximum waiting time
10 °C	24 h	72 h
20 °C	16 h	48 h
30 °C	10 h	16 h

The finished coating is fully mechanically and chemically resistant at 20 °C after 7 days.

Testing

Visual Testing

The coating is checked for visible defects such as bubbles, inclusions, inequalities, cracks or mechanical damage.

Testing on freedom from pores and cracks

The hardened sealing layer can be tested for leaks on a conductive substrate.

High voltage pore testing instrument:	e.g. Elmed ISOTEST inspect
Testing voltage:	3 kV per millimeter layer thickness

Safety and Disposal

The following points should be observed:

- Sufficient ventilation and venting (especially in pits and tanks)
- No smoking and no fire
- Safety Data Sheets
- Observe hazard warnings and safety instructions on labels
- Wear required personal protective equipment (avoid skin contact with materials).
- Clean and protect hands with skin protection soap (no solvents!) and skin protection cream
- Wear a dust mask when grinding (e.g. for repairs).
- Operating instructions as per § 14 of GefahrstoffV (Toxic Substances Act) and TRGS 507 (Technical regulations for Hazardous Substances - Germany)
- Accident prevention regulations by the Liability Insurance Association for the Chemical Industries (Germany)
- Avoid direct contact of the materials with the flame, especially during welding work (welding beads) on site

Preferably consume residual quantities. Do not pour into a spout or dustbin! Collect separately for disposal in durable, lockable and labelled containers.

GISCODE

Product	GISCODE
Alkadur HR	RE 90
Keranol EP 211	RE 30
Alkadur SB	RE 55

Cleaning of Equipment

Tools soiled with uncured materials can be cleaned with STEULER UNIVERSAL CLEANER (Technical Information TI 190). Only clean in well ventilated areas.

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27021604595491595 • V 4 • en

This issue replaces all previous versions.