Sikalastic® Rapid-722 Detail
WATERPROOFING SYSTEM FOR WIND TURBINES TOWER FOUNDATIONS

BUILDING TRUST

Sikalastic® Rapid-722 Detail
WATERPROOFING SYSTEM FOR WIND TURBINES TOWER FOUNDATIONS

THE Sikalastic® Rapid 722 SEALING SYSTEM protects reliably the building structure and thus your investment. With Sikalastic® Rapid-722 numerous challenges can be solved. **Sikalastic® Rapid-722 Detail** is a two-component, fastcuring polymethyl methacrylate reaction resin, fleece-armoured sealing system for durable, highly flexible sealing of heavily stressed tower foundations and segment flanges.The ETA approval and the general building authority approval Germany are available.

APPLICATIONS

- Sealing of heavily stressed tower foundations and segment flanges
- Sealing of working target cracks and expansion joints
- Also suitable for sealing buildings and roofs
- Can be used for joints made of WU concrete
- Sealing of surfaces or detailed connections

RELIABLE AND DURABLE

- For surfaces and complicated details

LOW TEMPERATURE FLEXIBLE

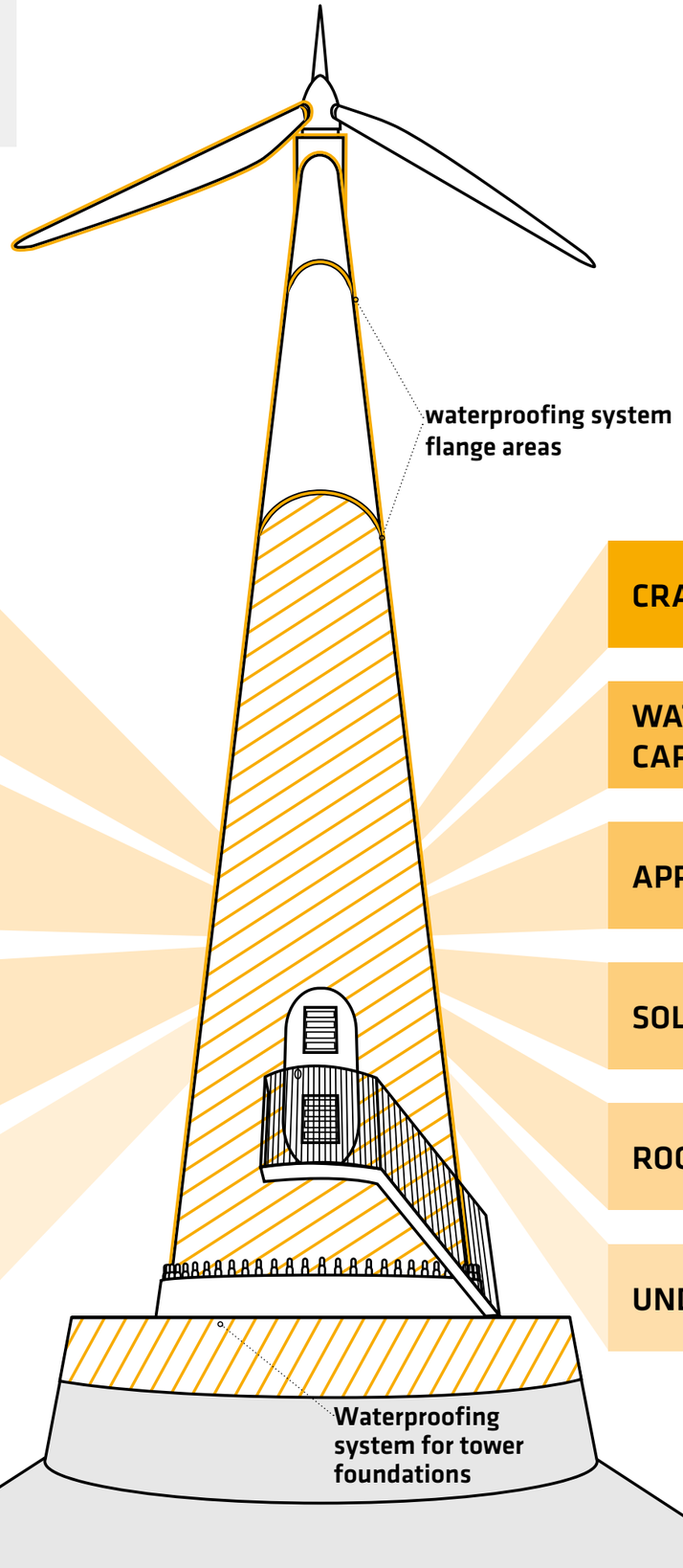
- Fast-curing, also at low temperatures -5 °C

WEATHER-TOLERANT

- Can be processed at temperature and humidity fluctuations
- Extremely short ventilation times

VERY DURABLE

- Against most acids and alkalis
- Against UV hydrolysis and alkaline loading



CRACK BRIDGING UP TO 2 MM

WATER VAPOUR DIFFUSION CAPABLE

APPLICABLE IN COLD

SOLVENT-FREE

ROOT-PROOF

UNDERFLOW PROOF

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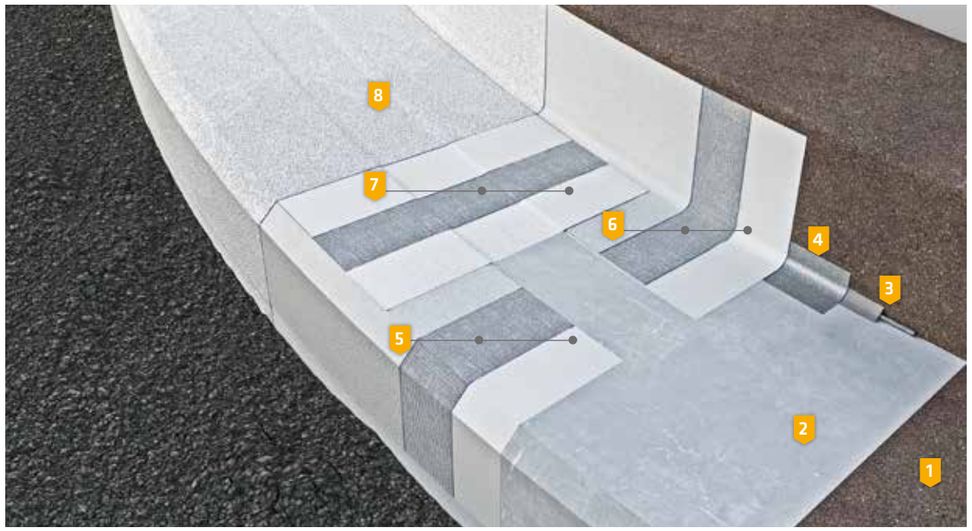
SYSTEM SETUP FOUNDATION



1. WU concrete mechanically pre-treated
2. Sikalastic® Rapid Primer Concrete or Primer see Primer Chart p. 8/9
3. Joint if available: filled with PE round cord, sealed with Sikaflex® PRO-3
4. Joint if available: joint sliding tape stone tape with PE surface
5. Sikalastic® Rapid-722 Detail/Fleece-110/ Sikalastic® Rapid-722 Detail
6. Sikalastic® Rapid-722 Detail/Fleece-110/ Sikalastic® Rapid-722 Detail
7. Sikalastic® Rapid-722 Detail/Fleece-110/ Sikalastic® Rapid-722 Detail
8. optional protective layer sealing: Sikalastic® Rapid-722 Detail scattered with quartz sand Sikalastic® Rapid-722 Detail

COLOURS

slate grey similar to RAL 7015	telegrau 4 similar to RAL 7047
agate grey similar to RAL 7038	light grey similar to RAL 7035

COMPONENTS

PRIMER AND LEVELING

Sikalastic® Rapid Primer concrete

Container 10 kg
Incl. 300 g KATpowder

Sikalastic® Rapid scratch filler

Container 10 kg
Incl. 300 g KATpowder

Sikalastic® Rapid Primer Metal

Container 1 L

spray can 0.5 L

ACCESSORIES

Sikalastic® Rapid cleaner

Container 10 L

SEALING RESIN AND SYSTEM CARRIER INSERT

Sikalastic® Rapid-722 Detail sealing resin

Container 10 kg
Incl. 200 g KATpowder

Sikalastic® Rapid Fleece-110

width 1.05 m/roll 50 m
width 0.35 m/roll 50 m
width 0.26 m/roll 50 m
width 0.20 m/roll 50 m

safety data sheets

product data sheets

Sikalastic® Rapid-722 Detail
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PROCESSING CONDITIONS

Product	air temperature min max	ground temperature min max	material temperature min max
Sikalastic® Rapid Primer Concrete	+3 °C to +35 °C	+3 °C to +50 °C	+3 °C to +30 °C
Sikalastic® Rapid scratch filler	+3 °C to +35 °C	+3 °C to +50 °C	+3 °C to +35 °C
Sikalastic® Rapid-722 Detail sealing resin	-5 °C to +35 °C	+3 °C to +50 °C	+3 °C to +30 °C
Sikalastic® Rapid Primer Metal / Metal spray	+3 °C to +35 °C	+3 °C to +35 °C	+3 °C to +30 °C

VERBRÄUCHE

Product	ground type		
	smooth	fine sandy	rough
Sikalastic® Rapid Primer Concrete	approx. 0.4 kg/m²	approx. 0.5 kg/m²	approx. 0.8 kg/m²
Sikalastic® Rapid scratch filler	approx. 0.8 kg/m²	approx. 0.9 kg/m²	approx. 1.0 kg/m²

Sikalastic® Rapid-722 Detail sealing resin	
Sealing resin with dry layer thickness at least 2.1 mm	at least 2.5 kg/m²
Roll template for quartz sand insertion	at least 1.0 kg/m²
Sealing	approx. 0.7 kg/m²

Sikalastic® Rapid Primer Metal	approx. 0.2 kg/m²
Sikalastic® Rapid Primer Metal Spray	approx. 0.1 l/m²
Oven-dried quartz sand grain size 0.7–1.2 mm	approx. 1.5 kg/m²

Fleece overlap	
Sikalastic® Rapid-722 Detail on Sikalastic® Rapid-722 Detail	at least 50 mm
Sikalastic® Rapid-722 Detail on other substrates	at least 100 mm

PRIMER RECOMMENDATION

GROUND TYPE	PREPARATION Always demarcate the area to be sealed by means of masking	PRIMING
Concrete	■ remove loose parts ■ grind with diamond cup wheel ■ clean ■ If necessary, level with scratch filler	**Sikalastic® Rapid Primer Concrete*** approx. 0.6 kg/m² minimum waiting time 20 min**
Steel coated (powder-coated steel) galvanized steel	■ grind with abrasive paper grain size 80-150 ■ clean/degrease with Sikalastic® Rapid Cleaner	**with coverage <5cm** **Sikalastic® Rapid Primer Metal/Metal spray** approx. 0.2 kg/m² minimum waiting time 2 hours maximum waiting time 8 hours** **with coverage >5 cm** **no primer necessary**
Old waterproofing PMMA based	■ thoroughly rub off with Sikalastic® Rapid Cleaner ■ ventilate for at least 15 minutes ■ if necessary, grind grain size 40–60	**No primer necessary**

*additionally with Sikalastic® Rapid KATpowder according to the dosing quantity required on site, see Product Data Sheet.
**+20 °C/50 % rel. humidity. If work is interrupted for longer than the maximum waiting time, the primer must be removed and re-primed.

CHEMICAL RESISTANCE

Depending on the duration of exposure and concentration, discoloration may occur.

Sikalastic®-722 Rapid Detail is resistant to the following media		
Acetic acid 10 %	Hydrogen peroxide 10 %	Potash
Ammonia 10 %	Kerosene	Potassium chloride
Ammonium chloride	**L**actic acid 30%	**R**icinus oil
Ammonium sulphate	Lemon juice	**S**eawater
Animal fats	Linseed oil	Sodium chloride
Apple juice	Lubricants	Sodium sulphate
Caustic soda 50%	Mineral oil	**V**egetable fat
Calcium chloride	**O**live oil	Vegetable juice
Chlorinated lime	Orange juice	Washing powder
Formic acid 10 %	**P**araffin oil	Washing-up liquid
Hydrochloric acid 30%	Petroleum	Wine
Hydraulic oil	Phosphoric acid	

Sikalastic® Rapid-722 Detail
EVALUATION AND PREPARATION OF THE SUBSTRATE

WHETHER OLD OR NEW – correct substrate analysis and preparation are the base of every successful waterproofing measure.
A thorough examination is the decisive prerequisite for determining the most suitable method for preparation of the substrate and an optimal waterproofing system.

1 SUBSTRATE STRENGTH
ANALYSIS

- On cementitious substrates, the compressive strength should be at least 25 N /mm^2.
- Substrates to be sealed must be load-bearing.

2 DEW POINT
ANALYSIS

- During application and curing, the substrate temperature must be at least 3 K above the dew point temperature.
- Protect from condensation during both phases.

3 ADHESIVE TENSILE STRENGTH
ANALYSIS

- The surface tensile strength for cement-bound substrates must be greater than 1.5 N/mm^2.
- The adhesive tensile strength is determined by means of a stamp peel test.

4 SUBSURFACE MOISTURE
ANALYSIS

- Substrate must be dry.
- E.g. cementitious substrates:
  ≤ 4 % (mass %) measurement CM device.

5 DRYING, CLEANING AND TESTING
PREPARATION

- In principle, the substrates to be sealed must be load-bearing, dry and free from adhesion substances.
- The substrates must be prepared with suitable preparation. Loose parts, dirt, weathering, dust, oil, grease, etc. must be removed.
- Trial and adhesion test surfaces are recommended.

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PROCESSING WATERPROOFING SYSTEM ON THE FOUNDATION BASE

Check condition of foundation base.
If required, repair concrete.

If necessary, delimit the area to be sealed with adhesive tape to demarcate.

Substrate preparation and cleaning with suitable measures. See p. 9/16

If necessary, fill joint with PE cord, seal with Sikaflex® PRO-3 and decouple with decouple by means of joint sliding tape.

Determination of the measured values adhesive pull, residual moisture and dew point

Prime according to p. 8/9.

Prepare fleece cuts

Mixing the waterproofing resin

First layer: 2/3 of total consumption per m^2

Laminate fleece without bubbles and wrinkles.

Second layer: 1/3 from total consumption per m^2

Now the seal is ready for operation.

PROCESSING OPTIONAL: PROTECTIVE OR USEFUL LAYER

Mask joint area with stone tape PE surface.
Roll underlayment min. 1.0 kg/m^2

Throw in quartz sand 0.7–1.2 mm wet in wet, grain to grain.
Tape joint area remove immediately afterwards.

Apply sealer approx. 0.7 kg/m^2

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WATERPROOFING SYSTEM FOR WIND TURBINES TOWER FOUNDATIONS

EXAMPLES OF TOOL SELECTION

1 **Basic equipment**

2 **Scale** with glass plate and weighing range up to 1 g

3 **Mixing bucket** e.g. 2.5 L / 5 L

4 **Stirring device**

7 **Small mixing vessel**
CAT powder

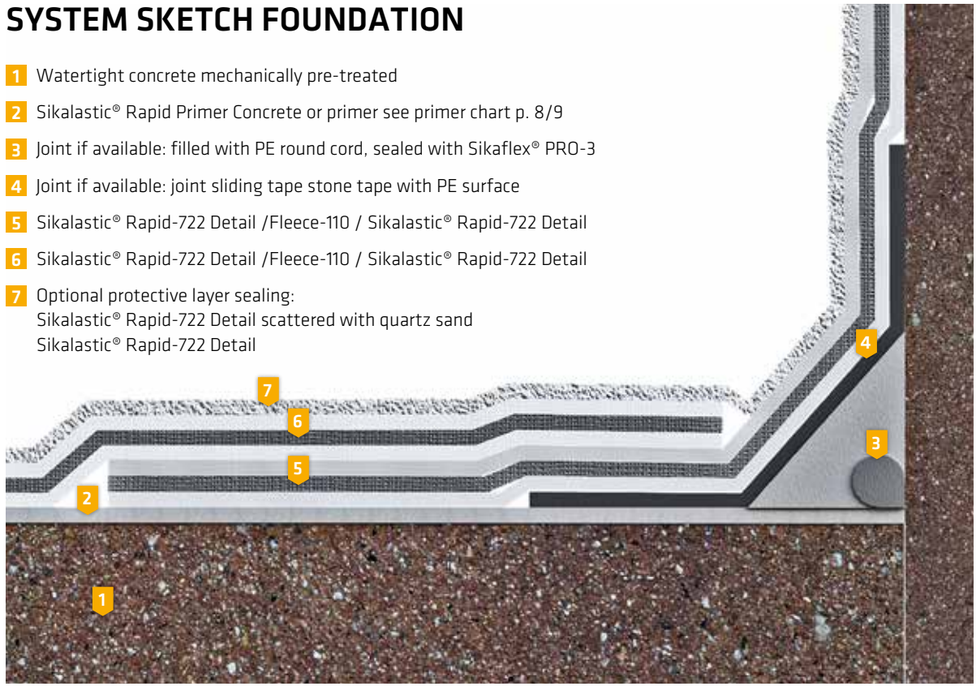
6 **Measurement device**
for air and surface temperature, air humidity

5 **Grinding tools**

Please note the specifications in the respective safety data sheets.

SYSTEM SKETCH FOUNDATION

1. Watertight concrete mechanically pre-treated
2. Sikalastic® Rapid Primer Concrete or primer see primer chart p. 8/9
3. Joint if available: filled with PE round cord, sealed with Sikaflex® PRO-3
4. Joint if available: joint sliding tape stone tape with PE surface
5. Sikalastic® Rapid-722 Detail /Fleece-110 / Sikalastic® Rapid-722 Detail
6. Sikalastic® Rapid-722 Detail /Fleece-110 / Sikalastic® Rapid-722 Detail
7. Optional protective layer sealing:
   Sikalastic® Rapid-722 Detail scattered with quartz sand
   Sikalastic® Rapid-722 Detail

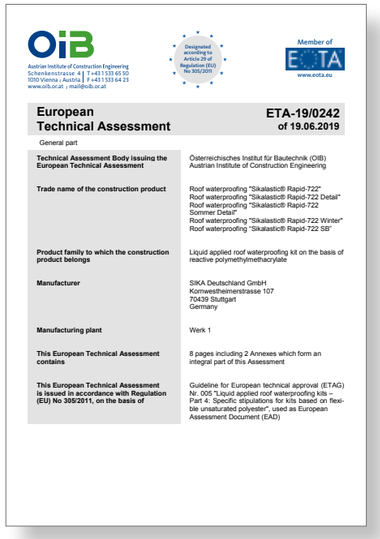


SYSTEM SKETCH TOWER FLANGE

1. Substrate pretreated according to primer chart p. 8/9
2. Primer according to primer chart p. 8/9
3. Waterproofing
   Sikalastic® Rapid-722 Detail /Fleece-110 / Sikalastic® Rapid-722 Detail
4. Sealing
   Sikalastic® Rapid-722 Detail

Sikalastic® Rapid-722 Detail
PERFORMANCE DATA

DE/E1 PMMA-2K-S-W3-P4-S1, S2, S3, S4-TL4, TH4-DIN 18531-2	
ETA No. 19/0242 according to ETAG 005.	
Useful life	W3 (expected useful life 25 years)
Climate zone	M–S (temperate and extreme climate)
Roof pitch	S1–S4 (all roof pitches)
Payload	P1–P4 (low to high)
Surface temp. low	TL4 (-30 °C)
Surface temp. high	TH4 (+90 °C)
Fire behavior according to EN 13501-1	Class E
Exposure to external fire according to CEN/TS 1187	B_{roof} (t1)
Building waterproofing in the field of application DIN 18533-3 Test certificate number: 20DE-02579	Crack-bridging up to 2 mm



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Designated according to Article 29 of Regulation (EU) No 305/2011

Member of EOTA
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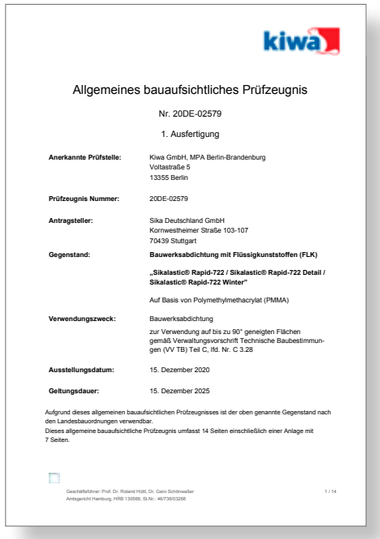
European Technical Assessment **ETA-19/0242 of 19.06.2019**

General part

Technical Assessment Body issuing the European Technical Assessment	Österreichisches Institut für Bautechnik (OIB) Austrian Institute of Construction Engineering
Trade name of the construction product	Roof waterproofing "Sikalastic® Rapid-722" Roof waterproofing "Sikalastic® Rapid-722 Detail" Roof waterproofing "Sikalastic® Rapid-722 Sommer Detail" Roof waterproofing "Sikalastic® Rapid-722 Winter" Roof waterproofing "Sikalastic® Rapid-722 SB"
Product family to which the construction product belongs	Liquid applied roof waterproofing kit on the basis of reactive polymethylmethacrylate
Manufacturer	SIKA Deutschland GmbH Kornwestheimerstrasse 107 70439 Stuttgart Germany
Manufacturing plant	Werk 1
This European Technical Assessment contains	8 pages including 2 Annexes which form an integral part of this Assessment
This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of	Guideline for European technical approval (ETAG) Nr. 005 "Liquid applied roof waterproofing kits – Part 4: Specific stipulations for kits based on flexible unsaturated polyester", used as European Assessment Document (EAD)



kiwa

Allgemeines bauaufsichtliches Prüfzeugnis

Nr. 20DE-02579

1. Ausfertigung

Anerkannte Prüfstelle:	Kiwa GmbH, MPA Berlin-Brandenburg Voltastraße 5 13355 Berlin
Prüfzeugnis Nummer:	20DE-02579
Antragsteller:	Sika Deutschland GmbH Kornwestheimer Straße 103-107 70439 Stuttgart
Gegenstand:	**Bauwerksabdichtung mit Flüssigkunststoffen (FLK)** **„Sikalastic® Rapid-722 / Sikalastic® Rapid-722 Detail / Sikalastic® Rapid-722 Winter"** Auf Basis von Polymethylmethacrylat (PMMA)
Verwendungszweck:	Bauwerksabdichtung zur Verwendung auf bis zu 90° geneigten Flächen gemäß Verwaltungsvorschrift Technische Baubestimmungen (VV TB) Teil C, lfd. Nr. C 3.28
Ausstellungsdatum:	15. Dezember 2020
Geltungsdauer:	15. Dezember 2025

Aufgrund dieses allgemeinen bauaufsichtlichen Prüfzeugnisses ist der oben genannte Gegenstand nach den Landesbauordnungen verwendbar.
Dieses allgemeine bauaufsichtliche Prüfzeugnis umfasst 14 Seiten einschließlich einer Anlage mit 7 Seiten.

Geschäftsführer: Prof. Dr. Roland Hüttl, Dr. Gero Schönwalter
Amtsgericht Hamburg, HRB 130568, St.Nr.: 46/736/03268

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CONTACT

NUMEROUS WATERPROOFING CHALLENGES for wind turbine foundations can be solved with Sikalastic® Rapid-722 Detail.

With our Sikalastic® technology, the functionality is maintained and the service life is extended – pragmatic, uncomplicated and of high quality.

This is how our qualified sealing specialists work after many years of experience.

We would like to advise you:

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WORLDWIDE SYSTEM SOLUTIONS FOR CONSTRUCTION AND INDUSTRY

CONCRETE

WATERPROOFING

ROOFING

FLOORING

CORROSION AND FIRE PROTECTION

SEALING AND BONDING

REFURBISHMENT

BUILDING FINISHING

INDUSTRY

As a subsidiary of the globally operative Sika AG, Baar/Switzerland, Sika Deutschland GmbH is one of the leading suppliers of building chemical product systems as well as sealants and adhesives for industrial manufacturing.

ROF/WG/-/-/01.2022

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