Silikal®

Protecting floors, buildings, infrastructure.

Silikal technical documentation

Methacrylate reactive resins

Expect more from your floor.


Expect more from your floor.

We are here for you...

Silikal, production and headquarters in Mainhausen/Frankfurt am Main

...since 70 years

For decades we have been working for you on the basis: coming from the practice of screed construction, we decided on developing and manufacturing floor coatings based on synthetic resins back in the early 60's. Numerous research and development projects accompany this path until today. Silikal now operates worldwide and is represented in Germany and Europe as well as on all continents of the world.

...a wide variety of problems

Whether for new buildings, repairs or renovations: our methacrylate resins have proven their worth as heavy-duty floor coatings in industry, commerce and trade, on traffic areas, in public and medical facilities. Furthermore, Silikal's repair mortar systems are used as reliable problem-solvers: to quickly repair breakouts, cracks or holes in concrete, precast concrete parts or screeds, to undergird bridge bearings, to prepare machine foundations or to fix heavy-duty profiles and structural elements. Today, our customers can choose from a variety of MMA, epoxy and PU products and specialities, such as those for waterproofing, filling cracks, road marking, mortar systems, PU concrete, adhesives, tactile guiding systems for the blind and design floors.

...with the right systems

We have the right answer to your floor problem. Fast curing without major interruption of operation, slip resistance levels as required, processing even at very low temperatures, a large selection of colour design options and much more… our product range makes it possible.

... and with a motivated, skilled team

You need advice? That's our strength – challenge us! Every project has its own demands and requirements. Our team knows the problems on site and has worldwide experience in application engineering. Get in touch with us. We will be happy to help whether you're implementing the toughest floor projects or interested in ways to use quick-curing mortar systems.

And if you'd really like to get into the details, the Silikal training centre in Mainhausen will be happy to provide you with extensive and hands-on information.

Rest assured – **we** are always on hand to help, around the clock, even on weekends and bank holidays.

Silikal® made in Germany seit 1951

TÜV PROFI CERT 73 100/104 663
Certified quality and environmental management systems Reg. No. 73 100 / 104 663

AgBB GEPRÜFT
Certified to AgBB evaluation scheme for non-transit indoor spaces

HACCP INTERNATIONAL FOOD SAFETY PROGRAMME CERTIFICATION
Our systems comply with the international HACCP guidelines

Europäisches Halal Zertifizierungsinstitut www.eurohalal.eu Halal EHZ
Our systems comply with European Halal guidelines

kiwa zertifiziert KIWA GMBH POLYMER INSTITUT
CE certification of in-house production control to EN 1504-2 performed by Kiwa GmbH Polymer Institute

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Technical Documentation

Contents

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Technical Documentation

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Expect more from your floor.

Technical Documentation

Foreword

Silikal reactive resins are used to produce flooring systems which are both decorative and highly resilient in almost all industrial sectors. Silikal has specialised in the technology of methacrylate reactive resins, which have proven themselves on many millions of square metres for more than 70 years.

Flooring systems made from reactive resins …

… not only provide outstanding protection for floors but also meet a great number of functional requirements for an extensive range of uses, such as:

- **Hygiene and physiological safety** thanks to seamless design and non-porous top coat
- **Slip resistance** due to appropriate surface design
- **Abrasion resistance** thanks to hard top coating
- **Resistance** to most aggressive media

Methacrylate reactive resins from Silikal …

… have significant advantages over other conventional reactive resins such as epoxy resin and polyurethane resin, including:

- **Fast curing** of the floor and immediate full load-bearing capacity, resulting in enormous time savings in renovations, as the area can be used much sooner
- Curing even at **low temperatures** (in some cases down to -10 °C) and therefore easy to apply even in winter or in cold storage
- **Easy to rework**, as methacrylate reactive resins adhere perfectly to older methacrylate coverings
- **Harmless to health** and therefore ideal for use in the food sector

This technical documentation …

… describes the standard flooring systems offered by Silikal for the most common applications. It also contains the technical data for all Silikal reactive resins and additives and general processing notes and regulations. Silikal reserves the right to make technical changes.

Silikal guarantees the accuracy of all values listed in the technical data sheets. Nevertheless, application- and processing-related tolerances may occur and deviations in this regard are permissible. To ensure the proper processing of Silikal materials, this should always be left to trained and experienced experts. Silikal attaches considerable importance to the training and technical support for its applicators and on providing comprehensive advice on use, including on site.

The guideline formulations recommended in the systems provide the greatest possible guarantee for optimal work, but do not relieve the applicator of their duty to carefully check and assess the specific circumstances in each individual case. In case of doubt, tests should be carried out before the implementation or Silikal should be consulted for advice.

The specialist Silikal applicators have many years of experience and therefore sufficient knowledge and skills even beyond the application limits described here. Always bear in mind that such cases entail risks.

Silikal assumes absolutely no application-specific guarantees except where such guarantees are agreed in written form on a case-by-case basis. This applies to circumstances, for example, beyond normal and typical use or information in brochures and other documents which are of a purely descriptive nature. It goes without saying that preparing an officially prescribed surface according to specifications (e.g. with slip resistance) does not mean that accidents can necessarily be prevented in this area or that any corresponding guarantee is offered in that regard. In general, care must be taken when using liquids, cleaning agents etc. on the finished flooring system and Silikal must be consulted in case of doubt. The same applies to using materials which have not been approved by Silikal.

It should be noted that a floor coating (in addition to its other properties) primarily serves to protect the substrate and to act as a wearing layer. Wear, in particular in the case of slip-resistant surfaces, is subjective and depends on the intensity of use, meaning that it is not possible to predict the service life in absolute terms. If treated appropriately and maintained correctly, flooring systems made from reactive resins often constitute the best and most cost-effective solutions over a period of many years.

Silikal points out that all currently applicable standards and regulations must also be strictly observed, such as safety and environmental regulations, DIN, ISO and EU standards and the instruction sheets and guidelines of the BEB (Federal Association of Screed and Floor Covering), third-party property rights and sound engineering practice.

Updates

This technical documentation is also available on the Silikal website at **“www.silikal.de”** where it is updated regularly.

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Silikal standard coating systems

Overview

SILIKAL® System B
Quartz SL

SILIKAL® System B: Quartz SL

Self-levelling MMA system with quartz broadcast

SILIKAL® Kitchen System

SILIKAL® Kitchen System

Self-levelling MMA system with quartz broadcast and waterproofing membrane

SILIKAL® System B
Quartz TA

SILIKAL® System B: Quartz TA

Trowel-applied MMA system with coloured quartz

SILIKAL® System C
Uni Colour

SILIKAL® System C: Uni Colour

Self-levelling MMA system

SILIKAL® System C
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SILIKAL® System C: Flakes

Self-levelling MMA system with flake broadcast

SILIKAL® System D
Cold Room

SILIKAL® System D: Cold Room

Flexible self-levelling MMA system with quartz broadcast

SILIKAL® System D
Outdoor

SILIKAL® System D: Outdoor

Flexible self-levelling MMA system with quartz broadcast

SILIKAL®
Concrete Look

SILIKAL® Concrete Look

Acrylic Design Floors

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SILIKAL® System B
Quartz SL

SILIKAL® System B: Quartz SL

Self-levelling MMA system with quartz broadcast

SILIKAL® System B – Quartz SL is a fast curing, decorative, hard wearing, methyl methacrylate coating. Coloured quartz is enclosed in the system to achieve the required slip resistance for the specific industry.

SILIKAL® System B is ideal for renovations and new projects because it reduces downtime to the minimum.

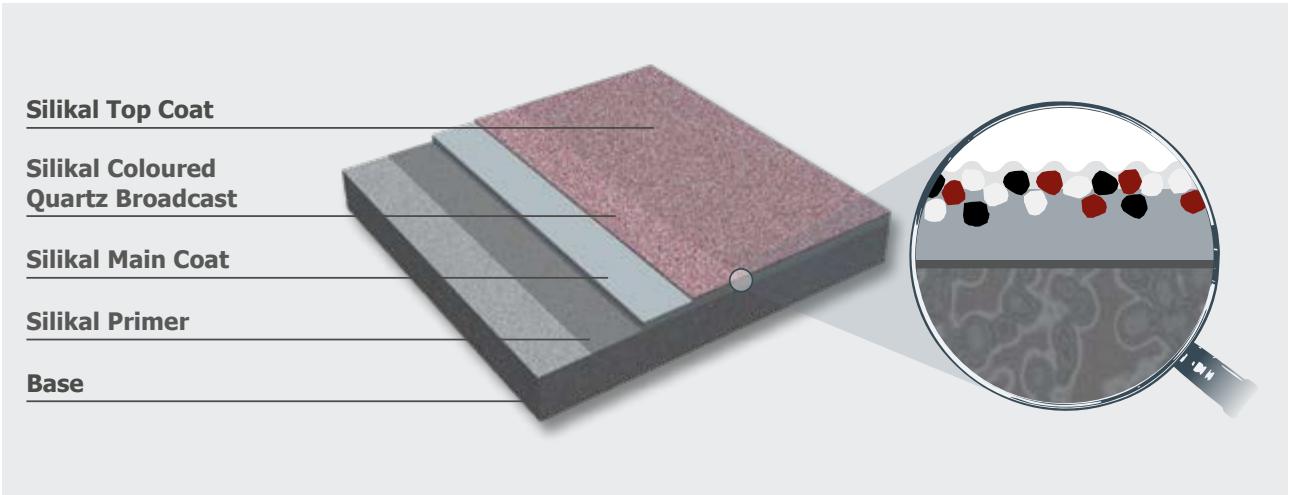
Area of application

- Areas with moderate to high mechanical stresses
- Dry and wet production areas
- Industrial kitchens
- Areas with high chemical load

Advantages

- Extremely short curing time. One hour after application of the last layer full mechanical and chemical resistant
- Excellent chemical resistance
- High mechanical resistance
- Variable slip resistance
- Seamless and hygienic finish
- Easy to clean and maintain
- Certified by HACCP International
- Outstanding resistance to ageing and weathering
- Application is possible on various substrates
- Good UV resistance
- Various colours

System configuration



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SILIKAL® System B: Quartz SL

Self-levelling MMA system with quartz broadcast

Products

- Silikal Standard Primer like SILIKAL® R 51 (Primer depends on the substrate. Please refer to the Silikal Primer Table or contact our technical department)
- Silikal Main Coat resin like SILIKAL® R 61 or comparable
- Silikal Coloured Quartz like SILIKAL® Filler FS or FM
- Silikal Top Coat like SILIKAL® R 71 or comparable

For complete technical details, material consumption, hardener quantities, guideline recipes please refer to the latest Silikal Technical Documentation and Product Data Sheets of the relevant products or consult our technical department.

Technical data

Curing time:	1 hour
Slip resistance:	R11 to R13 (DIN 51130) depending on the clients requirements
Compressive strength:	45 N/mm² (EN 196-1)
Flexural strength:	24 N/mm² (EN 196-1)
Tensile strength:	14 N/mm² (EN ISO 527-2)
Abrasion resistance:	Class AR 1 – heavy-duty
Temperature resistance:	0 °C to +60 °C (+80 °C for short periods e.g. for cleaning purposes)
Chemical resistance:	Refer to Silikal chemical resistance table
Water vapour permeability:	Class II (EN ISO 7783-2)
Fire behaviour:	Cfl-s1 (EN ISO 13501)
Thickness:	3 – 5 mm
Colour range:	Please refer to Silikal Colour Concept

⚠ **Guideline recipes, material consumption, hardener quantities etc. are given in the data sheets of the corresponding Silikal resins.**

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SILIKAL® Kitchen System

SILIKAL® Kitchen System

Self-levelling MMA system with quartz broadcast and waterproofing membrane

SILIKAL® Kitchen System is a fast curing, decorative, hard wearing, methyl methacrylate coating. Coloured quartz is enclosed in the system to achieve the required slip resistance for the specific industry. A waterproofing membrane is applied for improved concrete protection and better crack bridging properties.

SILIKAL® Kitchen System is ideal for renovations and new projects because it reduces downtime to the minimum.

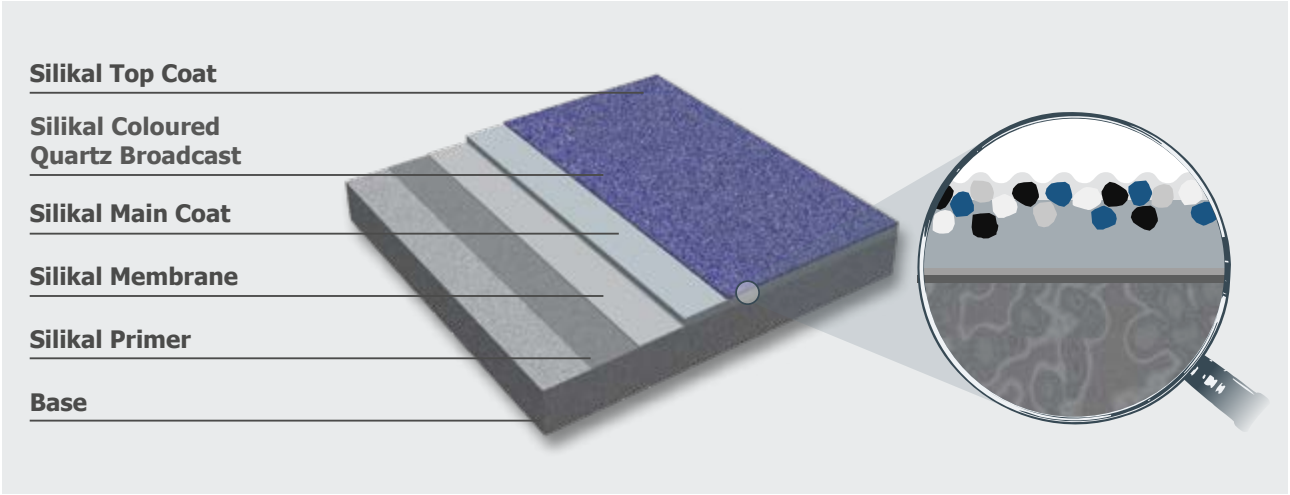
Area of application

- Areas with moderate to high mechanical stresses
- Industrial kitchen

Advantages

- Extremely short curing time. One hour after application of the last layer full mechanical and chemical resistant
- Excellent chemical resistance
- High mechanical resistance
- Variable slip resistance
- Seamless and hygienic finish
- Easy to clean and maintain
- Certified by HACCP International
- Outstanding resistance to ageing and weathering
- Application is possible on various substrates
- Good UV resistance
- Various colours

System configuration



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SILIKAL® Kitchen System

SILIKAL® Kitchen System

Self-levelling MMA system with quartz broadcast and waterproofing membrane

Products

- Silikal Standard Primer like SILIKAL® R 52 (Primer depends on the substrate. Please refer to the Silikal Primer Table or contact our technical department)
- Membrane like SILIKAL® RU 320 pigmented or comparable
- Silikal Main Coat resin like SILIKAL® R 61 or comparable
- Silikal Coloured Quartz like SILIKAL® Filler FS or FM
- Two times Silikal Top Coat like SILIKAL® R 71 or comparable

For complete technical details, material consumption, hardener quantities, guideline recipes please refer to the latest Silikal Technical Documentation and Product Data Sheets of the relevant products or consult our technical department.

Technical data

Curing time:	1 hour
Slip resistance:	R11 to R13 (DIN 51130) depending on the clients requirements
Compressive strength:	45 N/mm² (EN 196-1)
Flexural strength:	24 N/mm² (EN 196-1)
Tensile strength:	14 N/mm² (EN ISO 527-2)
Abrasion resistance:	Class AR 1 – heavy-duty
Temperature resistance:	0 °C to +60 °C (+80 °C for short periods e.g. for cleaning purposes)
Chemical resistance:	Refer to Silikal chemical resistance table
Water vapour permeability:	Class II (EN ISO 7783-2)
Fire behaviour:	Cfl-s1 (EN ISO 13501)
Thickness:	4 – 6 mm
Colour range:	Please refer to Silikal Colour Concept

⚠ **Guideline recipes, material consumption, hardener quantities etc. are given in the data sheets of the corresponding Silikal resins.**

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SILIKAL® System B
Quartz TA

SILIKAL® System B: Quartz TA

Trowel-applied MMA system with coloured quartz

SILIKAL® System B – Quartz TA is a fast curing, decorative, hard wearing, methyl methacrylate coating. The mix of resin and Coloured Quartz is compressed and leveled by trowel. This mix creates an extra compact screed which can withstand highest mechanical and chemical loads.

SILIKAL® System B is ideal for renovations and new projects because it reduces downtime to the minimum.

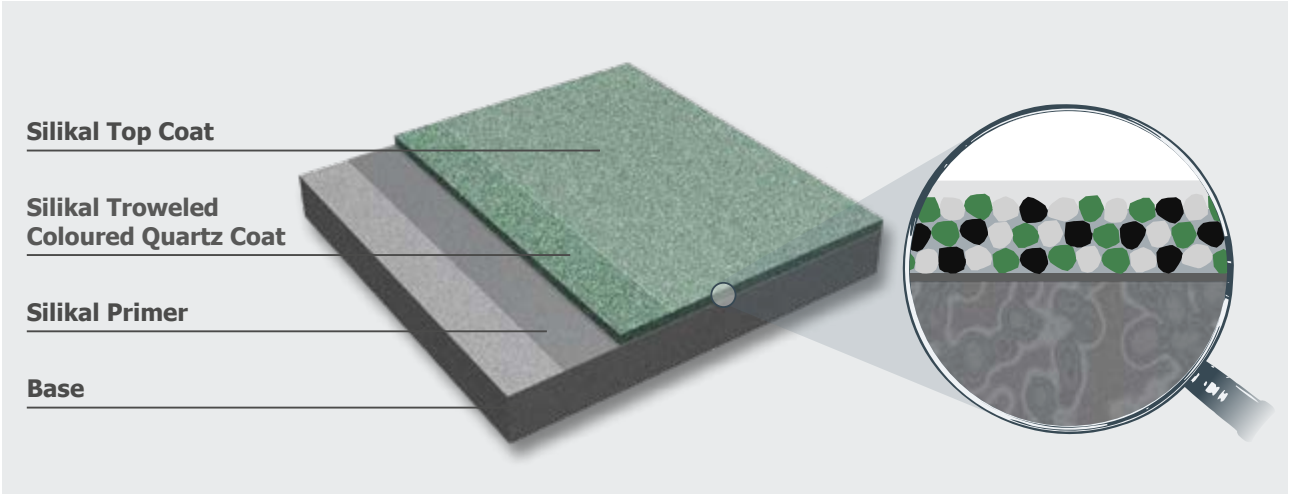
Area of application

- Areas with moderate to extreme high mechanical stresses
- Dry and wet production areas
- Industrial kitchen
- Areas with high chemical load

Advantages

- Extremely short curing time. One hour after application of the last layer full mechanical and chemical resistant
- Excellent chemical resistance
- High mechanical resistance
- Variable slip resistance
- Seamless and hygienic finish
- Easy to clean and maintain
- Certified by HACCP International
- Outstanding resistance to ageing and weathering
- Application is possible on various substrates
- Good UV resistance
- Various colours

System configuration



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SILIKAL® System B: Quartz TA

Trowel-applied MMA system with coloured quartz

Products

- Silikal Standard Primer like SILIKAL® R 51 (Primer depends on the substrate. Please refer to the Silikal Primer Table or contact our technical department)
- Silikal Main Coat resin like SILIKAL® R 61 or comparable
- Silikal Coloured Quartz like SILIKAL® Filler FS or FM
- Silikal Top Coat like SILIKAL® R 71 or comparable

For complete technical details, material consumption, hardener quantities, guideline recipes please refer to the latest Silikal Technical Documentation and Product Data Sheets of the relevant products or consult our technical department.

Technical data

Curing time:	1 hour
Slip resistance:	R11 to R13 (DIN 51130) depending on the clients requirements
Compressive strength:	45 N/mm² (EN 196-1)
Flexural strength:	24 N/mm² (EN 196-1)
Tensile strength:	13 N/mm² (EN ISO 527-2)
Abrasion resistance:	Class AR 1 – heavy-duty
Temperature resistance:	0 °C to +60 °C (+80 °C for short periods e.g. for cleaning purposes)
Chemical resistance:	Refer to Silikal chemical resistance table
Water vapour permeability:	Class II (EN ISO 7783-2)
Fire behaviour:	Efl (EN ISO 13501)
Thickness:	3 – 6 mm
Colour range:	Please refer to Silikal Colour Concept

⚠ **Guideline recipes, material consumption, hardener quantities etc. are given in the data sheets of the corresponding Silikal resins.**

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SILIKAL® System C
Uni Colour

SILIKAL® System C: Uni Colour

Pigmented self-levelling MMA system

SILIKAL® System C – Uni Colour is a fast curing, decorative, hard wearing, methylmethacrylate coating.

SILIKAL® System C is ideal for renovations and new projects because it reduces downtime to the minimum.

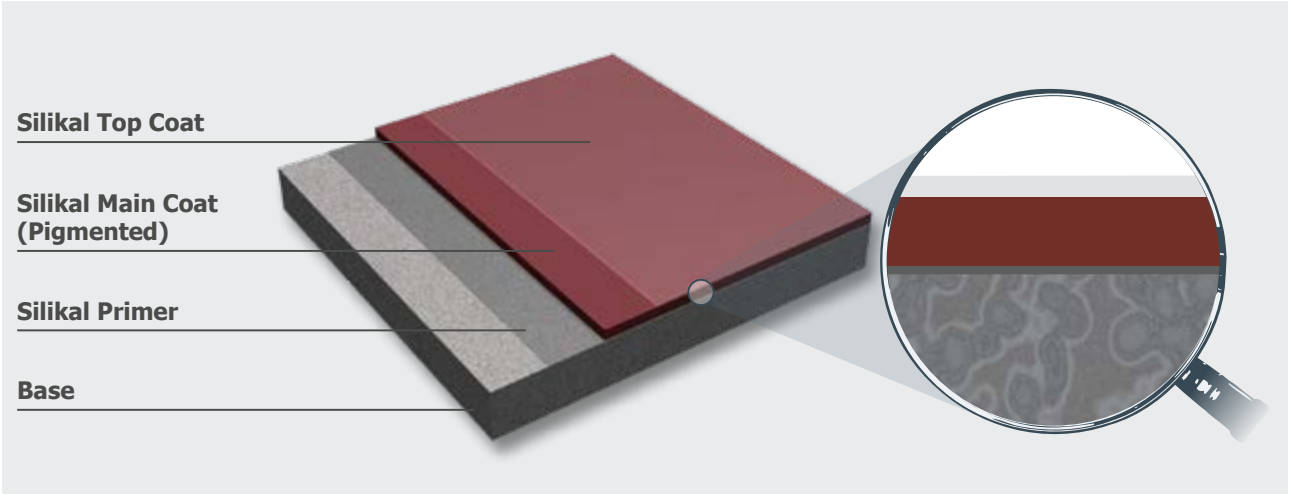
Area of application

- Mainly dry areas
- Dry production and manufacturing areas
- Warehouses
- Car workshops
- Hangars
- Pharma industry
- Corridors

Advantages

- Extremely short curing time. One hour after application of the last layer full mechanical and chemical resistant
- Excellent chemical resistance
- High mechanical resistance
- Seamless and hygienic finish
- Easy to clean and maintain
- Certified by HACCP International
- Outstanding resistance to ageing and weathering
- Application is possible on various substrates
- Good UV resistance
- Various colours

System configuration



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SILIKAL® System C: Uni Colour

Pigmented self-levelling MMA system

Products

- Silikal Standard Primer like SILIKAL® R 51 (Primer depends on the substrate. Please refer to the Silikal Primer Table or contact our technical department)
- Silikal Main Coat resin like SILIKAL® R 62 or comparable with addition of pigment such as SILIKAL® Pigment or a comparable product
- Silikal Top Coat like SILIKAL® R 72 or comparable

For complete technical details, material consumption, hardener quantities, guideline recipes please refer to the latest Silikal Technical Documentation and Product Data Sheets of the relevant products or consult our technical department.

Technical data

Curing time:	1 hour
Compressive strength:	45 N/mm² (EN 196-1)
Flexural strength:	25 N/mm² (EN 196-1)
Tensile strength:	10 N/mm² (EN ISO 527-2)
Abrasion resistance:	Class AR 1 – heavy-duty
Temperature resistance:	0 °C to +60 °C (+80 °C for short periods e.g. for cleaning purposes)
Chemical resistance:	Refer to Silikal chemical resistance table
Water vapour permeability:	Class II (EN ISO 7783-2)
Fire behaviour:	Efl (EN ISO 13501)
Thickness:	2 – 4 mm
Colour range:	Please refer to Silikal Colour Concept

⚠ **Guideline recipes, material consumption, hardener quantities etc. are given in the data sheets of the corresponding Silikal resins.**

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SILIKAL® System C
Flakes

SILIKAL® System C: Flakes

Self-levelling MMA system with flake broadcast

SILIKAL® System C – Flakes is a fast curing, decorative, hard wearing, methyl methacrylate coating. Coloured Flakes are broadcasted in the system to achieve a decorative, modern contemporary finish. Choose from various colours and design a floor with your favourite colour combination.

SILIKAL® System C is ideal for renovations and new projects because it reduces downtime to the minimum.

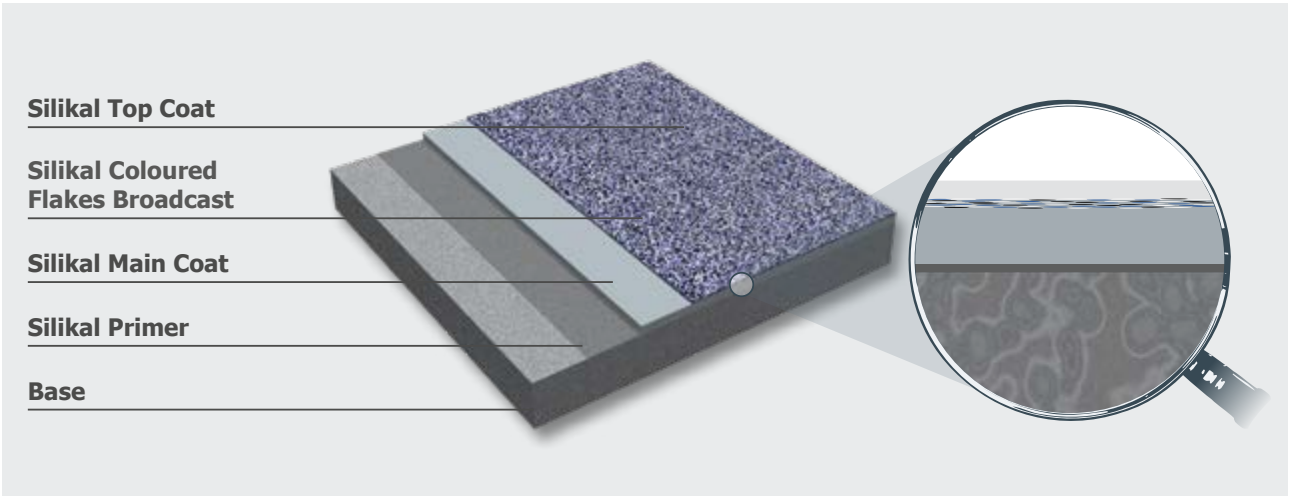
Area of application

- Mainly dry areas
- Supermarkets, shops
- Restaurants, cafes, bars, hotels, cinemas, casinos
- Schools, universities, hospitals, kindergartens
- Museums

Advantages

- Extremely short curing time. One hour after application of the last layer full mechanical and chemical resistant
- Excellent chemical resistance
- High mechanical resistance
- Variable slip resistance
- Seamless and hygienic finish
- Easy to clean and maintain
- Certified by HACCP International
- Outstanding resistance to ageing and weathering
- Application is possible on various substrates
- Good UV resistance
- Various colours

System configuration



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SILIKAL® System C: Flakes

Self-levelling MMA system with flake broadcast

Products

- Silikal Standard Primer like SILIKAL® R 51 (Primer depends on the substrate. Please refer to the Silikal Primer Table or contact our technical department)
- Silikal Main Coat resin like SILIKAL® R 62 or comparable
- Silikal Coloured Flakes
- Silikal Top Coat like SILIKAL® R 72 or comparable

For complete technical details, material consumption, hardener quantities, guideline recipes please refer to the latest Silikal Technical Documentation and Product Data Sheets of the relevant products or consult our technical department.

Technical data

Curing time:	1 hour
Slip resistance:	R10 (DIN 51130)
Compressive strength:	45 N/mm² (EN 196-1)
Flexural strength:	25 N/mm² (EN 196-1)
Tensile strength:	10 N/mm² (EN ISO 527-2)
Abrasion resistance:	Class AR 1 – heavy-duty
Temperature resistance:	0 °C to +60 °C (+80 °C for short periods e.g. for cleaning purposes)
Chemical resistance:	Refer to Silikal chemical resistance table
Water vapour permeability:	Class II (EN ISO 7783-2)
Fire behaviour:	Cfl-S1 (EN ISO 13501-1)
Thickness:	2 – 4 mm
Colour range:	Please refer to Silikal Colour Concept

⚠ **Guideline recipes, material consumption, hardener quantities etc. are given in the data sheets of the corresponding Silikal resins.**

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SILIKAL® System D
Cold Room

SILIKAL® System D: Cold Room

Flexible self-levelling MMA system with quartz broadcast

SILIKAL® System D – Cold Room is a fast curing, decorative, flexible, methyl methacrylate coating with excellent crack bridging properties. Quartz is enclosed in the system to achieve the required slip resistance for the specific industry.

SILIKAL® System D Cold Room is ideal for renovations and new projects because it reduces downtime to the minimum.

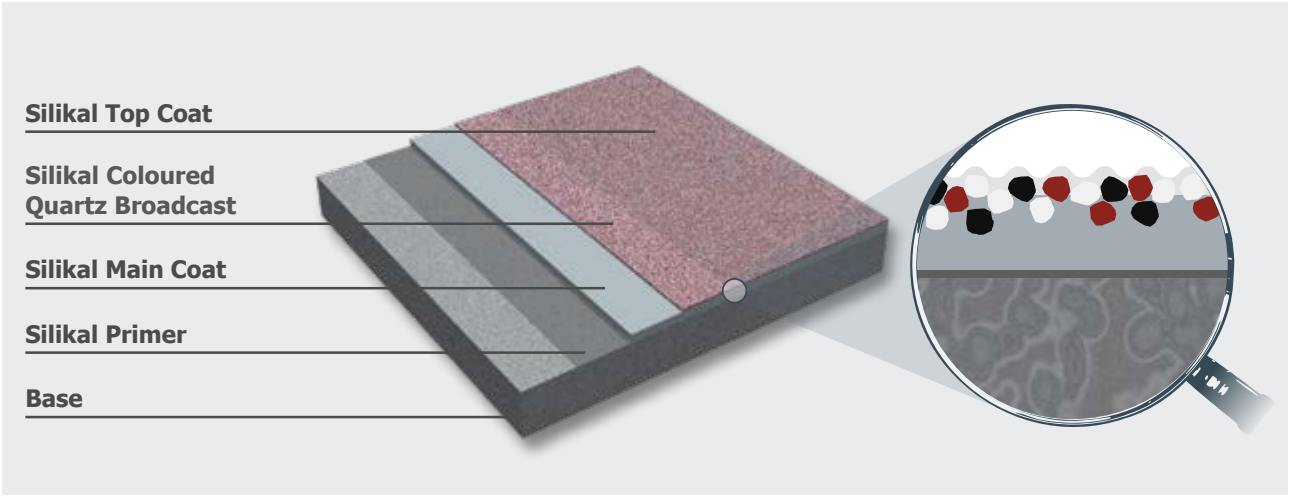
Area of application

- Cold rooms, refrigerators
- Freezers

Advantages

- Extremely short curing time. One hour after application of the last layer full mechanical and chemical resistant
- Excellent chemical resistance
- High mechanical resistance
- Variable slip resistance
- Seamless and hygienic finish
- Easy to clean and maintain
- Certified by HACCP International
- Outstanding resistance to ageing and weathering
- Application is possible on various substrates
- Good UV resistance
- Various colours

System configuration



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SILIKAL® System D: Cold Room

Flexible self-levelling MMA system with quartz broadcast

Products

- Silikal Standard Primer like SILIKAL® R 51 (Primer depends on the substrate. Please refer to the Silikal Primer Table or contact our technical department)
- Silikal Main Coat resin like SILIKAL® RV 368 or comparable
- Silikal Coloured Quartz like SILIKAL® Filler FS or FM
- Silikal Top Coat like SILIKAL® R 62 or comparable

For complete technical details, material consumption, hardener quantities, guideline recipes please refer to the latest Silikal Technical Documentation and Product Data Sheets of the relevant products or consult our technical department.

Technical data

Curing time:	1 hour
Slip resistance:	R11 to R13 (DIN 51130) depending on the clients requirements
Compressive strength:	25 N/mm² (EN 196-1)
Flexural strength:	10 N/mm² (EN 196-1)
Tensile strength:	15 N/mm² (DIN 527-2)
Abrasion resistance:	Class AR 1 – heavy-duty
Temperature resistance:	-25 °C to +45 °C (+60 °C for short periods e.g. for cleaning purposes)
Chemical resistance:	Refer to Silikal chemical resistance table
Water vapour permeability:	Class II (EN ISO 7783-2)
Fire behaviour:	Efl (EN ISO 13501-1)
Thickness:	4 – 5 mm
Colour range:	Please refer to Silikal Colour Concept

⚠ **Guideline recipes, material consumption, hardener quantities etc. are given in the data sheets of the corresponding Silikal resins.**

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SILIKAL® System D
Outdoor

SILIKAL® System D: Outdoor

Flexible self-levelling MMA system with quartz broadcast

SILIKAL® System D – Outdoor is a fast curing, decorative, flexible, methyl methacrylate coating with excellent crack bridging properties. Quartz is enclosed in the system to achieve the required slip resistance for the specific industry.

SILIKAL® System D Outdoor is ideal for renovations and new projects because it reduces downtime to the minimum.

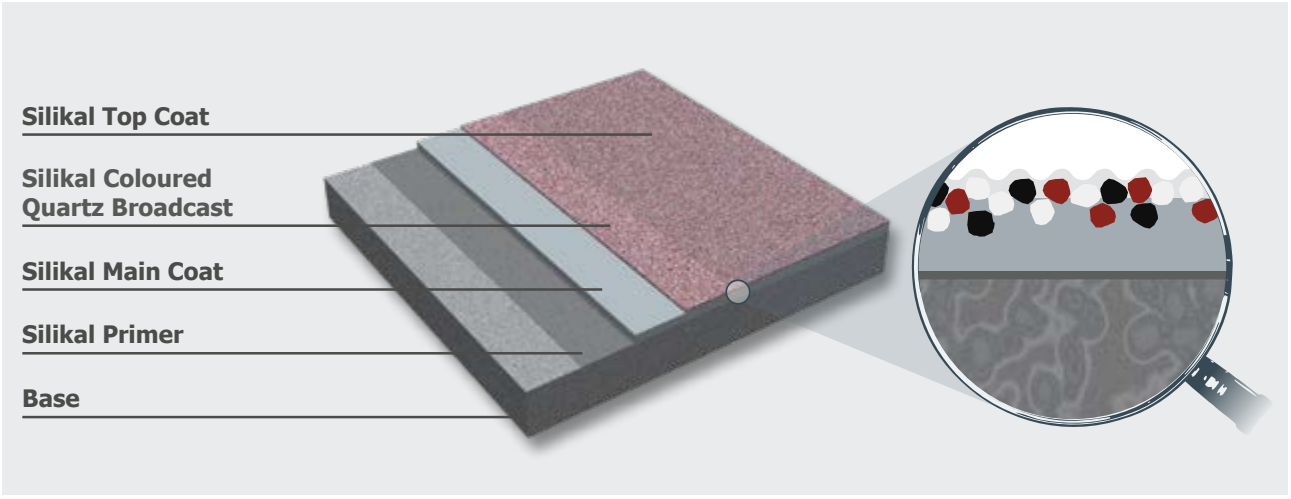
Area of application

- Outdoor areas
- Areas where substrate movement is expected

Advantages

- Extremely short curing time. One hour after application of the last layer full mechanical and chemical resistant
- Excellent chemical resistance
- High mechanical resistance
- Variable slip resistance
- Seamless and hygienic finish
- Easy to clean and maintain
- Certified by HACCP International
- Outstanding resistance to ageing and weathering
- Application is possible on various substrates
- Good UV resistance
- Various colours

System configuration



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Tel.: +49 (0) 61 82 / 92 35-0
mail@silikal.de · www.silikal.de

SILIKAL® System D: Outdoor

Flexible self-levelling MMA system with quartz broadcast

Products

- Silikal Standard Primer like SILIKAL® R 51 (Primer depends on the substrate. Please refer to the Silikal Primer Table or contact our technical department)
- Silikal Main Coat resin like SILIKAL® RV 368 or comparable
- Silikal Coloured Quartz like SILIKAL® Filler FS or FM
- Silikal Top Coat like SILIKAL® R 82 or comparable

For complete technical details, material consumption, hardener quantities, guideline recipes please refer to the latest Silikal Technical Documentation and Product Data Sheets of the relevant products or consult our technical department.

Technical data

Curing time:	1 hour
Slip resistance:	R11 to R13 (DIN 51130) depending on the clients requirements
Compressive strength:	25 N/mm² (EN 196-1)
Flexural strength:	10 N/mm² (EN 196-1)
Tensile strength:	15 N/mm² (DIN 527-2)
Abrasion resistance:	Class AR 1 – heavy-duty
Temperature resistance:	-25 °C to +45 °C (+60 °C for short periods e.g. for cleaning purposes)
Chemical resistance:	Refer to Silikal chemical resistance table
Water vapour permeability:	Class II (EN ISO 7783-2)
Fire behaviour:	Efl (EN ISO 13501-1)
Thickness:	4 – 5 mm
Colour range:	Please refer to Silikal Colour Concept

⚠ **Guideline recipes, material consumption, hardener quantities etc. are given in the data sheets of the corresponding Silikal resins.**

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SILIKAL® Concrete Look

Acrylic Design Floors

SILIKAL® Concrete Look is a fast curing, decorative, hard wearing, methyl methacrylate coating. Unique decorative coverings; creative, attractive one-of-a-kind finishes; dynamic, ultra-modern design.

SILIKAL® Concrete Look is ideal for renovations and new projects because it reduces downtime to a minimum.

Area of application

- Restaurants
- Boutiques
- Furniture shops
- Bars
- Public buildings

Advantages

- Extremely short curing time. One hour after application of the last layer full mechanical and chemical resistant
- Excellent chemical resistance
- High mechanical resistance
- Seamless and hygienic finish
- Easy to clean and maintain
- Certified by HACCP International
- Outstanding resistance to ageing and weathering
- Application is possible on various substrates
- Good UV resistance
- Various grey shades

System configuration

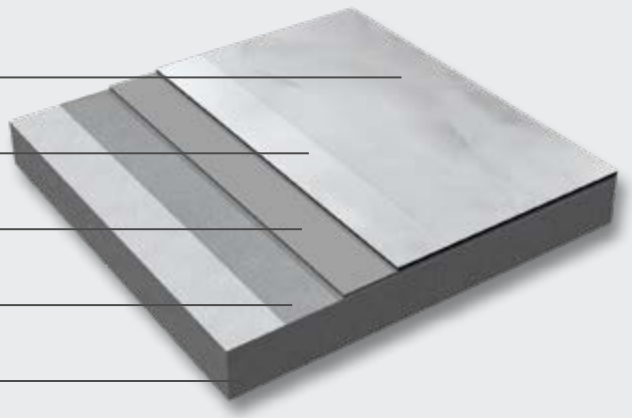
Silikal Top Coat

Silikal Design Coat

Silikal Pigmented Main Coat

Silikal Primer

Base



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SILIKAL® Concrete Look

Acrylic Design Floors

Products

- Silikal Standard Primer like SILIKAL® R 51 (Primer depends on the substrate. Please refer to the Silikal Primer Table or contact our technical department)
- Silikal Main Coat resin like SILIKAL® R 62 or comparable with addition of pigment such as SILIKAL® Pigment, approx. RAL 7016, 7030 or 7031
- Silikal Design Coat SILIKAL® R 69 C
- Silikal Top Coat like SILIKAL® R 71 or comparable

For complete technical details, material consumption, hardener quantities, guideline recipes please refer to the latest Silikal Technical Documentation and Product Data Sheets of the relevant products or consult our technical department.

Technical data

Curing time:	1 hour
Compressive strength:	45 N/mm² (EN 196-1)
Tensile strength:	25 N/mm² (DIN 527-2)
Abrasion resistance:	Class AR 1 – heavy-duty
Temperature resistance:	0 °C to +60 °C (+80 °C for short periods e.g. for cleaning purposes)
Chemical resistance:	Refer to Silikal chemical resistance table
Water vapour permeability:	Class II (EN ISO 7783-2)
Fire behaviour:	Dfl-S1 (EN ISO 13501-1)
Thickness:	3 – 5 mm
Colour range:	Please refer to Silikal Colour Concept

⚠ **Guideline recipes, material consumption, hardener quantities etc. are given in the data sheets of the corresponding Silikal resins.**

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Silikal Products – Overview

Silikal Primers

Product	Use	Container size
SILIKAL® R 51	Reactive primer for cementitious substrates	5 kg, 25 kg canister; 180 kg drum
SILIKAL® R 52	Reactive primer for cementitious substrates	5 kg, 25 kg canister; 180 kg drum
SILIKAL® R 53	Reactive primer for cementitious substrates, VOC-reduced	5 kg, 25 kg canister; 180 kg drum
SILIKAL® R 54	Reactive primer for slightly damp cementitious substrates	5 kg, 25 kg canister; 180 kg drum
SILIKAL® RU 380	Reactive primer for absorbent and non-absorbent substrates	5 kg, 25 kg canister; 180 kg drum
SILIKAL® R 59	Reactive primer for metal and other non-absorbent substrates	10 kg hobbock
SILIKAL® Porfil RE 40	Pore-filling, water pressure-tight and solvent-free two-component epoxy resin impregnation	5 kg, 20 kg combi tub
SILIKAL® RE 55	Reactive primer for polymer-modified substrates, epoxy-resin-based	Comp. A 20 kg hobbock / comp. B 10 kg tub

Silikal Main Coats

Product	Use	Container size
SILIKAL® R 61	Reactive, slightly elasticised resin for non-slip coatings in wet areas	5 kg, 25 kg canister; 180 kg drum
SILIKAL® R 61 HW	Reactive, elasticised resin for non-slip coatings in wet areas	5 kg, 25 kg canister; 180 kg drum
SILIKAL® R 62	Reactive, slightly elasticised resin with very good self-levelling properties	5 kg, 25 kg canister; 180 kg drum
SILIKAL® R 63	Reactive, slightly elasticised resin for self-levelling coatings, VOC-reduced	5 kg, 25 kg canister; 180 kg drum
SILIKAL® R 64	Reactive resin for trowel-applied coloured quartz coatings indoors	5 kg, 25 kg canister; 180 kg drum
SILIKAL® R 69 C	Reactive, slightly elasticised resin for system SILIKAL® Concrete Look	5 kg, 25 kg canister; 180 kg drum
SILIKAL® RV 368	Reactive, impact-resistant resin, flexible at low temperatures, for self-levelling coatings	5 kg, 25 kg canister; 180 kg drum
SILIKAL® R 68	Reactive, flexibilised, viscoplastic reactive resin for self-levelling coatings	5 kg, 25 kg canister; 180 kg drum
SILIKAL® RU 320	Highly flexible reactive resin for membrane layers and waterproofing	5 kg, 25 kg canister; 180 kg drum
SILIKAL® RU 320 Thix	Highly flexible, thixotropic, pigmented reactive resin for membrane layers and waterproofing	10 kg, 20 kg hobbock
SILIKAL® RU 320 Pigmented	Highly flexible, pigmented reactive resin for membrane layers and waterproofing	10 kg, 20 kg hobbock

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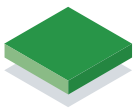
Silikal Products – Overview

Silikal Top Coats

Product	Use	Container size
SILIKAL® R 71	Reactive, hard top coat	5 kg, 25 kg canister; 180 kg drum
SILIKAL® R 72	Reactive, hard top coat	5 kg, 25 kg canister; 180 kg drum
SILIKAL® R 73	Reactive, hard top coat, low VOC	5 kg, 25 kg canister; 180 kg drum
SILIKAL® R 82	Reactive, elasticised top coat	5 kg, 25 kg canister; 180 kg drum
SILIKAL® RF 6200 / Base	Reactive, pigmented, slightly elasticised top coat. Alternatively, also available as non-pigmented, pre-filled base variant.	25 kg hobbock
SILIKAL® RF 6250 / Base	Reactive, pigmented, slightly elasticised top coat on vertical surfaces. Alternatively, also available as non-pigmented, pre-filled base variant.	25 kg hobbock
SILIKAL® RF 7000	Reactive, pigmented, hard top coat	25 kg hobbock
SILIKAL® RF 8200	Reactive, pigmented, slightly elasticised top coat	25 kg hobbock
SILIKAL® RE 77	Reactive top coat, epoxy-resin-based	Comp. A 20 kg hobbock / comp. B 10 kg tub

Silikal Additional Products

Product	Use	Container size
SILIKAL® HK 31	Reactive, low-yellowing, transparent coving paste	25 kg hobbock
SILIKAL® BPO	Hardening powder/initiator	0.1 kg, 0.5 kg, 1.0 kg bag; 10 kg, 25 kg box
SILIKAL® Additive ZA	Low-temperature accelerator	4 x 250 g can
SILIKAL® Additive M	Adhesion promoter	100 g, 250 g bottle
SILIKAL® TA 1 and TA 2	Fibrous thickening and thixotropic agent for coving formulations and wall coatings, asbestos-free	10 kg sack



Silikal Mortar Systems

Product	Use	Container size
SILIKAL® R 17 Powder	Reactive resin mortar for concrete repairs and screed	15 kg sack
SILIKAL® R 17 Hardener	Curing agent liquid/initiator	2 L, 6 L, 30 L canister; 180 kg drum
SILIKAL® R 15 Powder	Flexibilised reactive resin mortar for repairs and screed outdoors	15 kg sack
SILIKAL® R 15 Hardener	Curing agent liquid/initiator	3 L canister

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Silikal products – overview

Silikal Aggregates

Product	Use	Container size
SILIKAL® Filler SL	Quartz-flour-free Silikal filler for scattered toppings	25 kg sack
SILIKAL® Filler SV	Mixture of quartz flour and finer quartz sand for self-levelling toppings	25 kg sack
SILIKAL® Filler QM	Quartz flour as fine filler for thin poured and roll-applied coatings	25 kg sack
SILIKAL® Filler QS	Quartz sand in various particle sizes for scattering, sprinkling, as mortar additive or as filler additive for certain coatings	25 kg sack
SILIKAL® Filler FS	Coloured quartz (individual colours) with uniform grain-size distribution curve for scattered toppings	25 kg sack
SILIKAL® Filler FM	Coloured quartz mixtures for scattered toppings and for trowelable toppings	25 kg sack
SILIKAL® Filler CL	Filler mixture as system component for the Silikal design coating SILIKAL® Concrete Look	15 kg sack
SILIKAL® Filler Si	Mixture of quartz flour and quartz sand of various particle sizes for scattered toppings of 4 mm thickness and above	25 kg sack
SILIKAL® Filler 65	Silikal mortar sand for high-fill SILIKAL® RH 65	25 kg sack
SILIKAL® Filler SG	Sharp-edged, opaque chippings for retroactive creation of anti-slip properties	25 kg sack
SILIKAL® Filler GR	Sharp-edged granite chippings, grey or brown, in particle size 0.5 – 1 mm and 1 – 2 mm as additive mixture for coloured quartz to achieve high anti-slip classes	25 kg sack
SILIKAL® Flakes	Size: 3 mm (see booklet **“Colour concepts”**, available separately)	5 kg, 20 kg cardboard box
SILIKAL® Pigment	Pigment powder for colouring Silikal resins	500 g bag; 25 kg sack
SILIKAL® Pigment AS	In combination with five colours for antistatic adjustment of top coats (see booklet **“Colour concepts”**, available separately)	20 kg sack

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Expect more from your floor.


Expect more from your floor.

Silikal Primer Table for MMA floor coatings

Overview

The primer layer on absorbing substrates (screed, concrete) is applied to fill up pores until the substrate is saturated and sealed off. On non-absorbing substrates (tiles, metal) the primer provides the perfect bonding between coating and substrate.

Our primer table below is a guidance what primer should be used on different substrates:

Substrates	SILIKAL® R 51	SILIKAL® R 52	SILIKAL® R 53	SILIKAL® R 59	SILIKAL® RU 380	SILIKAL® R 54 + SILIKAL® Additive M	SILIKAL® Porfil RE 40	
Dry cementitious substrates; residual moisture </= 4 % CM	x	x	x		x			
Cementitious substrates with increased residual moisture </= 5 % CM and/or damp cementitious substrates						x		
Critical residual moisture and/or high rising dampness							x	
Anhydrite and magnesite screeds								not suitable as a substrate
Mastic asphalt screeds (indoor) strength class IC 10 or IC 15					x			
Tiles/ceramic toppings					x			
Metal/steel surfaces				x	x			
Wooden surfaces								please contact our technical department
PVC/vinyl flooring								not suitable as a substrate
Natural stone								bonding and adhesion test required
Acrylic (2K, BPO hardened)	x	x	x		x			
Epoxy resin (EP)								bonding and adhesion test required
Polyurethane (PU)								bonding and adhesion test required
Polyurethane cement								please contact our technical department

Legal Notes

The information provided in our Silikal primer table is based on our experience and is given to the best of our knowledge. Silikal cannot be held liable and provides no guarantee in connection with the primer table. Responsibility for the inspection and preparation of the subfloor in accordance with the data sheets and technical documentation is carried by the application company. Any necessary adaptation of the primer to specific conditions of use is to be performed at the responsibility of the planner and/or the application company. It may not be possible to use the described primer in each individual building project.

Relevant specialist knowledge is vital for the processing of methacrylate resins. Taking part in Silikal training is a minimum requirement.

Expect more from your floor.

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SILIKAL® R 51

Reactive primer for cementitious substrates

Properties

- Low viscosity
- High penetration capacity

Area of application

- Primer resin for concrete and cement screed
- Note: If a shorter pot life / hardening time is desired, the special product SILIKAL® RS 551 can be used (data sheet on request)
- Note: If priming needs to be performed at temperatures from -11 °C to -25 °C, the special product SILIKAL® R 51 (-25 °C) can be used (data sheet on request)

Hardener dosages

Temperature	SILIKAL® BPO % by weight *	Pot life approx. min.	Hardening time approx. min.
-10 °C	7.0	22	60
0 °C	5.0	15	40
+20 °C	3.0	12	30
+30 °C	2.0	10	25

* The amount of SILIKAL® BPO is always calculated with reference to the amount of resin.

Advice on application

- SILIKAL® BPO must be stirred in until it is fully dissolved (approx. 1 minute or approx. 2 minutes for temperatures below +5 °C) and the mixture must be used immediately.
- The mixture must be applied such that it forms a film. If the mixture penetrates in the substrate, it must be reworked wet in wet.
- Puddling must be avoided during application.
- Curing and adhesion tests must generally be performed.
- Always use primers as clear resin – they should never be filled or pigmented.

Guideline recipe

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 10 litre bucket
1	SILIKAL® R 51	100 %		10 kg
	Total:	**100 %**	**Average consumption: 400 g/m²**	**10 kg**
2	SILIKAL® BPO	2 – 7 % with ref. to no. 1		See “Hardener dosages” table for quantities

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SILIKAL® R 51

Reactive primer for cementitious substrates

Characteristics as delivered

Property	Approx. value
Viscosity, +20 °C	70 mPa · s
Density, +20 °C	0.98 g/cm³
Application temperature	-10 °C to +30 °C

CE marking

CE
09
SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
R51-001
EN 13813:2002
Synthetic resin screed
for application in buildings

Reaction to fire	E_{fl}
Release of corrosive substances	SR
Wear resistance	≤ AR1
Bond strength	≥ 1.5
Impact resistance	≥ IR 4

CE
09
SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
System-B-001
EN 1504-2:2004 1119
ZA.1d(1.3), ZA.1f(5.1) and ZA.1g(6.1)
Synthetic resin screed
for application in buildings
Detailed declaration of performance:
www.silikal.com

Other applicable documents

SILIKAL® BPO	Data sheet BPO
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

The information in this data sheet replaces all previous information about the product and its application. The application instructions as well as the technical data of the product are only guidelines. The buyer is responsible for the application and claims of third parties.

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SILIKAL® R 52

Reactive primer for cementitious substrates

Properties

– Medium viscosity

– Medium penetration capacity

Area of application

– Primer resin for concrete and cement screed

Hardener dosages

Temperature	SILIKAL® BPO % by weight *	Pot life approx. min.	Hardening time approx. min.
+5 °C	6.0	15	50
+10 °C	5.0	15	40
+20 °C	3.0	12	35
+30 °C	2.0	12	30

* The amount of SILIKAL® BPO is always calculated with reference to the amount of resin.

Advice on application

– SILIKAL® BPO must be stirred in until it is fully dissolved (approx. 1 minute) and the mixture must be used immediately.

– The mixture must be applied such that it forms a film. If the mixture penetrates in the substrate, it must be reworked wet in wet.

– Curing and adhesion tests must generally be performed.

– Puddling must be avoided during application.

– Always use primers as clear resin – they should never be filled or pigmented.

Guideline recipe

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 10 litre bucket
1	SILIKAL® R 52	100 %		10 kg
	Total:	**100 %**	**Average consumption: 400 g/m²**	**10 kg**
2	SILIKAL® BPO	2 – 6 % with ref. to no. 1		See “Hardener dosages” table for quantities

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SILIKAL® R 52

Reactive primer for cementitious substrates

Characteristics as delivered

Property	Approx. value
Viscosity, +20 °C	300 mPa · s
Density, +20 °C	0.98 g/cm³
Application temperature	+5 °C to +30 °C

CE marking

CE
09
SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
R52-001
EN 13813:2002
Synthetic resin screed
for application in buildings

Reaction to fire	E_{fl}
Release of corrosive substances	SR
Wear resistance	≤ AR1
Bond strength	≥ 1.5
Impact resistance	≥ IR 4

CE
09
SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
System-C-001
EN 1504-2:2004 1119
ZA.1d(1.3), ZA.1f(5.1) and ZA.1g(6.1)
Synthetic resin screed
for application in buildings
Detailed declaration of performance:
www.silikal.com

Other applicable documents

SILIKAL® BPO	Data sheet BPO
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

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SILIKAL® R 53

Reactive primer for cementitious substrates, VOC-reduced

Properties

- Low viscosity
- Good penetration capacity
- VOC-reduced (according to AgBB scheme)

Area of application

- Primer resin for systems with low VOC emissions on cementitious substrates

Hardener dosages

Temperature	SILIKAL® BPO % by weight *	Pot life approx. min.	Hardening time approx. min.
+10 °C	2.0	12	55
+15 °C	2.0	10	50
+20 °C	1.5	10	45
+30 °C	1.0	8	40

* The amount of SILIKAL® BPO is always calculated with reference to the amount of resin.

Advice on application

- SILIKAL® BPO must be stirred in until it is fully dissolved (approx. 1 minute) and the mixture must be used immediately.
- The mixture must be applied such that it forms a film. If the mixture penetrates in the substrate, it must be reworked wet in wet.
- Puddling must be avoided during application.
- Curing and adhesion tests must generally be performed.
- Always use primers as clear resin – they should never be filled or pigmented.

Guideline recipe

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 10 litre bucket
1	SILIKAL® R 53	100 %		10 kg
	Total:	**100 %**	**Average consumption: 400 g/m²**	**10 kg**
2	SILIKAL® BPO	1 – 2 % with ref. to no. 1		See “Hardener dosages” table for quantities

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SILIKAL® R 53

Reactive primer for cementitious substrates, VOC-reduced

Characteristics as delivered

Property	Approx. value
Viscosity, +20 °C	100 mPa · s
Density, +20 °C	0.98 g/cm³
Application temperature	+10 °C to +30 °C

CE marking

CE
09
SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
R53-001
EN 13813:2002
Synthetic resin screed
for application in buildings

Reaction to fire	E_{fl}
Release of corrosive substances	SR
Wear resistance	≤ AR1
Bond strength	≥ 1.5
Impact resistance	≥ IR 4

CE
09
SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
System-CL-001
EN 1504-2:2004 1119
ZA.1d(1.3), ZA.1f(5.1) and ZA.1g(6.1)
Synthetic resin screed
for application in buildings
Detailed declaration of performance:
www.silikal.com

Other applicable documents

SILIKAL® BPO	Data sheet BPO
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

The information in this data sheet replaces all previous information about the product and its application. The application instructions as well as the technical data of the product are only guidelines. The buyer is responsible for the application and claims of third parties.

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SILIKAL® R 54

Reactive primer for slightly damp cementitious substrates

Properties

- Low viscosity
- Improved adhesion on slightly damp cementitious substrates
- Good penetration capacity

Area of application

- Primer resin for slightly damp cementitious substrates

Hardener dosages

Temperature	SILIKAL® BPO % by weight *	Pot life approx. min.	Hardening time approx. min.
+5 °C	2.5	14	60
+10 °C	2.0	12	55
+20 °C	1.5	10	45
+30 °C	1.0	8	40

* The amount of SILIKAL® BPO is always calculated with reference to the amount of resin.

Hardener dosages in connection with 0.3 weight % SILIKAL® Additive M* for slightly damp substrates

Temperature	SILIKAL® BPO % by weight *	Pot life approx. min.	Hardening time approx. min.
+5 °C	3.5	14	60
+10 °C	3.0	12	55
+20 °C	2.5	10	45
+30 °C	2.0	8	40

* The amount of SILIKAL® BPO and SILIKAL® Additive M is always calculated with reference to the amount of resin.

Advice on application

- SILIKAL® BPO must be stirred in until it is fully dissolved (approx. 1 minute) and the mixture must be used immediately.
- The mixture must be applied such that it forms a film. If the mixture penetrates in the substrate, it must be reworked wet in wet.
- Puddling must be avoided during application.
- SILIKAL® Additive M further supports adhesion.
- Curing and adhesion tests must generally be performed.
- Always use primers as clear resin – they should never be filled or pigmented.

Guideline recipe

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 10 litre bucket
1	SILIKAL® R 54	100 %		10 kg
	Total:	**100 %**	**Average consumption: 400 g/m²**	**10 kg**
2	SILIKAL® BPO	1 – 3.5 % with ref. to no. 1		See “Hardener dosages” table for quantities

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SILIKAL® R 54

Reactive primer for slightly damp cementitious substrates

Characteristics as delivered

Property	Approx. value
Viscosity, +20 °C	100 mPa · s
Density, +20 °C	0.98 g/cm³
Application temperature	+5 °C to +30 °C

CE marking

CE

09

SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com

R54-001

EN 13813:2002

Synthetic resin screed
for application in buildings

Reaction to fire	E_{fl}
Release of corrosive substances	SR
Wear resistance	≤ AR1
Bond strength	≥ 1.5
Impact resistance	≥ IR 4

Other applicable documents

SILIKAL® BPO	Data sheet BPO
General notes	Technical documentation MMA
SILIKAL® Additive M	Data sheet Additive M
Safety data sheets	All used Silikal products

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Expect more from your floor.

SILIKAL® RU 380

Reactive primer for absorbent and non-absorbent substrates

Properties

- Medium viscosity
- Medium penetration capacity and good adhesion

Area of application

- Universal primer resin for both cementitious substrates and non-absorbent substrates

Hardener dosages

Temperature	SILIKAL® BPO % by weight *	Pot life approx. min.	Hardening time approx. min.
-10 °C	4.5	35	80
0 °C	3.0	32	60
+10 °C	2.0	18	55
+20 °C	1.5	12	45
+30 °C	1.0	10	40

* The amount of SILIKAL® BPO is always calculated with reference to the amount of resin.

Hardener dosages in connection with 0.3 weight % SILIKAL® Additive M*

Temperature	SILIKAL® BPO % by weight *	Pot life approx. min.	Hardening time approx. min.
-10 °C	5.5	35	80
0 °C	4.0	32	60
+10 °C	3.0	18	55
+20 °C	2.5	12	45
+30 °C	2.0	10	40

* The amount of SILIKAL® BPO and SILIKAL® Additive M is always calculated with reference to the amount of resin.

Advice on application

- SILIKAL® BPO must be stirred in until it is fully dissolved (approx. 1 minute) and the mixture must be used immediately.
- The mixture must be applied such that it forms a film. If the mixture penetrates in the substrate, it must be reworked wet in wet.
- Puddling must be avoided during application.
- SILIKAL® Additive M further supports adhesion. 0.3% by weight SILIKAL® Additive M, calculated with reference to the amount of resin, can be added. This also requires the addition of SILIKAL® BPO to be increased by 1% by weight.
- Curing and adhesion tests must generally be performed.
- Always use primers as clear resin – they should never be filled or pigmented.

Guideline recipe, primer

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 10 litre bucket
1	SILIKAL® RU 380	100 %		10 kg
	Total:	**100 %**	**Average consumption: 400 g/m²**	**10 kg**
2	SILIKAL® BPO	1 – 4.5 % with ref. to no. 1		See “Hardener dosages” table for quantities

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mail@silikal.de · www.silikal.de

SILIKAL® RU 380

Reactive primer for absorbent and non-absorbent substrates

Guideline recipe, thin coat

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 10 litre bucket
1	SILIKAL® RU 380	65 %		6.5 kg
2	SILIKAL® Filler QM	30 %		3.0 kg
3	SILIKAL® Pigment	5 %		0.5 kg
	Total:	**100 %**	**Average consumption: approx. 600 g/m²**	**10 kg**
4	SILIKAL® BPO	1 – 4.5 % with ref. to no. 1		See “Hardener dosages” table for quantities

Characteristics as delivered

Property	Approx. value
Viscosity, +20 °C	200 mPa · s
Density, +20 °C	0.99 g/cm³
Application temperature	-10 °C to +30 °C

CE marking

CE
09
SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
RU380-001
EN 13813:2002
Synthetic resin screed for application in buildings

Reaction to fire	E_{fl}
Release of corrosive substances	SR
Wear resistance	≤ AR1
Bond strength	≥ 1.5
Impact resistance	≥ IR 4

CE
09
SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
System-Küche-Alternativ-001
EN 1504-2:2004 1119
ZA.1d(1.3), ZA.1f(5.1) and ZA.1g(6.1)
Synthetic resin screed for application in buildings
Detailed declaration of performance: www.silikal.com

Other applicable documents

SILIKAL® BPO	Data sheet BPO
SILIKAL® Filler QM	Data sheet FQM
SILIKAL® Pigment	Data sheet PIG
SILIKAL® Additive M	Data sheet Additive M
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

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SILIKAL® R 59

Reactive primer for metal and other non-absorbent substrates

Properties

- Medium viscosity
- Good adhesion on non-absorbent substrates
- Good film-forming properties

Area of application

- Primer resin for non-absorbent substrates such as metal, tiles, etc.

Hardener dosages

Temperature	SILIKAL® BPO % by weight *	Pot life approx. min.	Hardening time approx. min.
0 °C	5.0	14	60
+10 °C	4.0	12	55
+20 °C	2.0	10	45
+30 °C	1.0	8	40

* The amount of SILIKAL® BPO is always calculated with reference to the amount of resin.

Advice on application

- SILIKAL® BPO must be stirred in until it is fully dissolved (approx. 1 minute) and the mixture must be used immediately.
- The mixture must be applied such that it forms a film. If the mixture penetrates in the substrate, it must be reworked wet in wet.
- Puddling must be avoided during application.
- Curing and adhesion tests must generally be performed.
- Always use primers as clear resin – they should never be filled or pigmented.

Guideline recipe

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 10 litre bucket
1	SILIKAL® R 59	100 %		10 kg
	Total:	**100 %**	**Average consumption: 400 g/m²**	**10 kg**
2	SILIKAL® BPO	1 – 5 % with ref. to no. 1		See “Hardener dosages” table for quantities

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SILIKAL® R 59

Reactive primer for metal and other non-absorbent substrates

Characteristics as delivered

Property	Approx. value
Viscosity, +20 °C	900 mPa · s
Density, +20 °C	0.99 g/cm³
Application temperature	0 °C to +30 °C

CE marking

CE

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Ostring 23 · 63533 Mainhausen
www.silikal.com

R59-001

EN 13813:2002

Synthetic resin screed
for application in buildings

Reaction to fire	E_{fl}
Release of corrosive substances	SR
Wear resistance	≤ AR1
Bond strength	≥ 1.5
Impact resistance	≥ IR 4

Other applicable documents

SILIKAL® BPO	Data sheet BPO
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

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SILIKAL® Porfil RE 40

Pore-filling, water pressure-tight and solvent-free two-component epoxy resin impregnation

Properties

- Extremely low-viscosity
- Water pressure-tight
- Good penetration capacity, pore-filling
- Resistant to rising moisture

Area of application

- Vapour barrier impregnation on damp or fresh concrete
- Pore-filling impregnation for cementitious substrates in case of rising moisture (up to 5 bar)

Mixing ratio

Temperature	Component A	Component B	Application time approx. min.	Hardening time approx. hour
+8 °C	100 parts by weight	28 parts by weight	40	>48
+20 °C			20	>24
+30 °C			10	>12

Advice on application

- SILIKAL® Porfil RE 40 consists of two liquid components (mixing ratio 10:2.8), which need to be mixed intensively for 1 – 2 minutes. Immediately after mixing, completely empty onto the floor.
- One application step is normally sufficient. A second application step, “wet in wet”, may be necessary depending on the absorbency of the substrate.
- Before work is commenced, a water drop test must be performed to check the absorbency of the floor (water must penetrate quickly – if the drop remains in place or seeps away slowly, SILIKAL® Porfil RE 40 cannot be used).
- A rubber slider is used for application. SILIKAL® Porfil RE 40 must not form a film. Excess resin must be fully removed with a painter’s roller after 10 – 15 minutes.
- After SILIKAL® Porfil RE 40 has fully cured and before reworking with a MMA coating system, the surface must be lightly grinded.
- SILIKAL® Porfil RE 40 is not a substitute for a primer resin. The following Silikal system must be applied, starting with the primer.
- After SILIKAL® Porfil RE 40 has been applied, the substrate must be evenly wetted, without film formation or puddling.

Guideline recipe

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 10 litre bucket
1	SILIKAL® Porfil RE 40 A	78.1 %	1 packing unit, comp. A	7.81 kg
2	SILIKAL® Porfil RE 40 B	21.9 %	1 packing unit, comp. B	2.19 kg
	Total:	**100 %**	**Average consumption: 150 g/m²**	**10 kg**

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SILIKAL® Porfil RE 40

Pore-filling, water pressure-tight and solvent-free two-comp. epoxy resin impregnation

Characteristics as delivered

Property	Approx. value
Viscosity, component A, +20 °C	20 mPa · s
Viscosity, component B, +20 °C	50 mPa · s
Density, component A, +20 °C	1.09 g/cm³
Density, component B, +20 °C	0.87 g/cm³
Application temperature	+8 °C to +30 °C

CE marking

CE

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SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com

Profil-RE40-001

EN 13813:2002

Synthetic resin screed
for application in buildings

Reaction to fire	E_{fl}
Release of corrosive substances	SR
Wear resistance	≤ AR1
Bond strength	≥ 1.5
Impact resistance	≥ IR 4

Other applicable documents

General notes
Safety data sheets
Technical documentation MMA
All used Silikal products

The information in this data sheet replaces all previous information about the product and its application. The application instructions as well as the technical data of the product are only guidelines. The buyer is responsible for the application and claims of third parties.

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SILIKAL® RE 55

Reactive primer for polymer-modified substrates, epoxy-resin-based

Properties

- High viscosity
- Good adhesion

Area of application

- Primer resin with good adhesion on polymer-modified concrete and cement screed which MMA primer cannot adhere to or cure on

Mixing ratio

Temperature	Component A	Component B	Application time approx. min.	Hardening time approx. hour
+10 °C	100 parts by weight	50 parts by weight	40	24
+20 °C			30	10
+30 °C			20	6

Advice on application

- SILIKAL® RE 55 consists of two liquid components (mixing ratio 1:2). The components must be mixed by thorough stirring for 2 – 3 minutes. To avoid unmixed resin residue on the edge of the mixing container, the finished mixture must be transferred to a new container and mixed for a further 1 – 2 minutes. The mixture must be applied such that it forms a film. Puddling must be avoided during application. If the substrate is highly absorbent, a second primer application is recommended. For the following coating with MMA, the SILIKAL® RE 55 primer must be fully broadcasted with quartz sand, e.g. SILIKAL® Filler QS 0.7 – 1.2 mm. After complete curing, the excess sand must be removed and priming must be carried out again with an MMA primer.

Guideline recipe

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 30 litre bucket
1	SILIKAL® RE 55 A	67 %	1 packing unit, comp. A	20 kg
2	SILIKAL® RE 55 B	33 %	1 packing unit, comp. B	10 kg
	Total:	**100 %**	**Average consumption: 400 g/m²**	**30 kg**

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SILIKAL® RE 55

Reactive primer for polymer-modified substrates, epoxy-resin-based

Characteristics as delivered

Property	Approx. value
Viscosity, component A, +20 °C	700 mPa · s
Viscosity, component B, +20 °C	100 mPa · s
Density, component A, +20 °C	1.12 g/cm³
Density, component B, +20 °C	1.02 g/cm³
Application temperature	+10 °C to +30 °C

CE marking

CE

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www.silikal.com

RE55-001

EN 13813:2002

Synthetic resin screed
for application in buildings

Reaction to fire	E_{fl}
Release of corrosive substances	SR
Wear resistance	≤ AR1
Bond strength	≥ 1.5
Impact resistance	≥ IR 4

Other applicable documents

SILIKAL® Filler QS	Data sheet FQS
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

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Fromage et charcuterie
PROM


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SILIKAL® R 61

Reactive, slightly elasticised resin for non-slip coatings in wet areas

Properties

- Medium viscosity
- Slightly elasticised
- Good self-levelling properties
- Good filler wetting

Area of application

- Main coat resin for broadcasted and trowelled coatings in wet areas
- Depending on mechanical, thermal or chemical load, the coating thickness can be varied from 3 to 6 mm

Hardener dosages

Temperature	SILIKAL® BPO % by weight *	Pot life approx. min.	Hardening time approx. min.
0 °C	6.0	20	60
+10 °C	4.0	20	45
+20 °C	3.0	15	30
+30 °C	2.0	10	25

* The amount of SILIKAL® BPO is always calculated with reference to the amount of resin.

Advice on application

- First the fillers and pigments need to be stirred into the resin until an homogeneous state is achieved (no lumps) and only then SILIKAL® BPO should be added and mixed until it has dissolved completely (approx. 1 minute), except for screeds for trowelable coatings – in this case SILIKAL® BPO should be stirred in before SILIKAL® Filler FM, and the mixture should be used immediately.
- The trowelable coloured quartz coating should be pre-spread to the desired coating thickness with a rake and then needs to be well compacted with a smoothing trowel.
- For broadcasted coatings, e.g. with SILIKAL® Filler FM, always broadcast until saturation, until there are no glossy areas remaining. Once the main coat has cured, sweep or vacuum away any loose grains of sand.

Guideline recipe, self-levelling thin layer coating 3 mm

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 30 litre bucket
1	SILIKAL® R 61	33 %		12.5 kg
2	SILIKAL® Filler SL	65 %	1 sack	25 kg
3	SILIKAL® Pigment	2 %		1 kg
	Total:	**100 %**	**Average consumption: 5 kg/m²**	**38.5 kg**
4	SILIKAL® BPO	2 – 6 % with ref. to no. 1		See “Hardener dosages” table for quantities

Guideline recipe, non-slip, self-levelling thick layer coating 5 mm

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 30 litre bucket
1	SILIKAL® R 61	28 %		10 kg
2	SILIKAL® Filler SL	70 %	1 sack	25 kg
3	SILIKAL® Pigment	2 %		1 kg
	Total:	**100 %**	**Average consumption: 9 kg/m²**	**36 kg**
4	SILIKAL® BPO	2 – 6 % with ref. to no. 1		See “Hardener dosages” table for quantities

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SILIKAL® R 61

Reactive, slightly elasticised resin for non-slip coatings in wet areas

Guideline recipe, decorative coloured quartz screed 4 – 6 mm

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 30 litre bucket
1	SILIKAL® R 61	22 %		7 kg
2	SILIKAL® Filler FM	78 %	1 sack	25 kg
	Total:	**100 %**	**Average consumption: 2 kg/m² per mm thickness**	**32 kg**
3	SILIKAL® BPO	2 – 6 % with ref. to no. 1		See “Hardener dosages” table for quantities

Characteristics as delivered

Property	Approx. value
Viscosity, +20 °C	200 mPa · s
Density, +20 °C	0.99 g/cm³
Application temperature	0 °C to +30 °C

CE marking

CE
09
SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
R61-001
EN 13813:2002
Synthetic resin screed for application in buildings

Reaction to fire	E_{fl}
Release of corrosive substances	SR
Wear resistance	≤ AR1
Bond strength	≥ 1.5
Impact resistance	≥ IR 4

CE
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SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
System-Küche-001
EN 1504-2:2004 1119
ZA.1d(1.3), ZA.1f(5.1) and ZA.1g(6.1)
Synthetic resin screed for application in buildings
Detailed declaration of performance: www.silikal.com

Other applicable documents

SILIKAL® BPO	Data sheet BPO
SILIKAL® Filler SL	Data sheet FSL
SILIKAL® Filler FM	Data sheet FFM
SILIKAL® Pigment	Data sheet PIG
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

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Expect more from your floor.

SILIKAL® R 61 HW

Reactive, elasticised resin for non-slip coatings in wet areas

Properties

- Medium viscosity
- Elasticised
- Good self-levelling properties
- Good filler wetting

Area of application

- Main coat resin for broadcasted and trowelled coatings in wet areas with frequent temperature change
- Depending on mechanical, thermal or chemical load, the coating thickness can be varied from 3 to 6 mm

Hardener dosages

Temperature	SILIKAL® BPO % by weight *	Pot life approx. min.	Hardening time approx. min.
0 °C	6.0	25	70
+10 °C	4.0	20	50
+20 °C	3.0	15	40
+30 °C	2.0	10	30

* The amount of SILIKAL® BPO is always calculated with reference to the amount of resin.

Advice on application

- First the fillers and pigments need to be stirred into the resin until an homogeneous state is achieved (no lumps) and only then SILIKAL® BPO should be added and mixed until it has dissolved completely (approx. 1 minute), except for screeds for trowelable coatings – in this case SILIKAL® BPO should be stirred in before SILIKAL® Filler FM, and the mixture should be used immediately.
- The trowelable coloured quartz coating should be pre-spread to the desired coating thickness with a rake and then needs to be well compacted with a smoothing trowel.
- For broadcasted coatings, e.g. with SILIKAL® Filler FM, always broadcast until saturation, until there are no glossy areas remaining. Once the main coat has cured, sweep or vacuum away any loose grains of sand.

Guideline recipe, non-slip, self-levelling thin layer coating 3 mm

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 30 litre bucket
1	SILIKAL® R 61 HW	33 %		12.5 kg
2	SILIKAL® Filler SL	65 %	1 sack	25 kg
3	SILIKAL® Pigment	2 %		1 kg
	Total:	**100 %**	**Average consumption: 5 kg/m²**	**38.5 kg**
4	SILIKAL® BPO	2 – 6 % with ref. to no. 1		See “Hardener dosages” table for quantities

Guideline recipe, non-slip, self-levelling thick layer coating 5 mm

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 30 litre bucket
1	SILIKAL® R 61 HW	28 %		10 kg
2	SILIKAL® Filler SL	70 %	1 sack	25 kg
3	SILIKAL® Pigment	2 %		1 kg
	Total:	**100 %**	**Average consumption: 9 kg/m²**	**36 kg**
4	SILIKAL® BPO	2 – 6 % with ref. to no. 1		See “Hardener dosages” table for quantities

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SILIKAL® R 61 HW

Reactive, elasticised resin for non-slip coatings in wet areas

Guideline recipe, decorative coloured quartz screed 4 – 6 mm

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 30 litre bucket
1	SILIKAL® R 61 HW	22 %		7 kg
2	SILIKAL® Filler FM	78 %	1 sack	25 kg
	Total:	**100 %**	**Average consumption: approx. 2.0 kg/m² per mm thickness**	**32 kg**
3	SILIKAL® BPO	2 – 6 % with ref. to no. 1		See “Hardener dosages” table for quantities

Characteristics as delivered

Property	Approx. value
Viscosity, +20 °C	300 mPa · s
Density, +20 °C	0.98 g/cm³
Application temperature	0 °C to +30 °C

CE marking

CE

09

SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com

R61-HW-001

EN 13813:2002

Synthetic resin screed
for application in buildings

Reaction to fire	E_{fl}
Release of corrosive substances	SR
Wear resistance	≤ AR1
Bond strength	≥ 1.5
Impact resistance	≥ IR 4

Other applicable documents

SILIKAL® BPO	Data sheet BPO
SILIKAL® Filler SL	Data sheet FSL
SILIKAL® Filler FM	Data sheet FFM
SILIKAL® Pigment	Data sheet PIG
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

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SILIKAL® R 62

Reactive, slightly elasticised resin with very good self-levelling properties

Properties

- Very good self-levelling properties
- Easy to process
- Medium viscosity
- Good wetting characteristics

Area of application

- Main coat resin for self-levelling coatings in dry areas without slope
- Depending on mechanical, thermal or chemical load, the coating thickness can be varied from 1 to 4 mm
- As top coat for main coats broadcasted with coloured quartz in cold rooms and outdoor areas

Hardener dosages

Temperature	SILIKAL® BPO % by weight *	Pot life approx. min.	Hardening time approx. min.
0 °C	6.0	20	50
+10 °C	4.0	20	45
+20 °C	2.0	15	40
+30 °C	1.0	12	30

* The amount of SILIKAL® BPO is always calculated with reference to the amount of resin.

Advice on application

- First the fillers and pigments need to be stirred into the resin until a homogeneous state is achieved (no lumps) and only then SILIKAL® BPO should be added and mixed until it has dissolved completely (approx. 1 minute). The mixture should be used immediately.
- For coatings with broadcast, e.g. with SILIKAL® Flakes, always broadcast until saturation, until there are no glossy areas remaining. Once the main coat has cured, sweep or vacuum away any loose grains of flakes.

Guideline recipe, main coat, thin 1 – 2 mm

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 30 litre bucket
1	SILIKAL® R 62	47 %		20 kg
2	SILIKAL® Filler SV	50 %		20 kg
3	SILIKAL® Pigment	3 %		1 kg
	Total:	**100 %**	**Average consumption: 1.5 kg/m² per mm thickness**	**41 kg**
4	SILIKAL® BPO	1 – 6 % with ref. to no. 1		See “Hardener dosages” table for quantities

Guideline recipe, main coat, standard 3 – 4 mm

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 30 litre bucket
1	SILIKAL® R 62	33 %		13 kg
2	SILIKAL® Filler SV	65 %	1 sack	25 kg
3	SILIKAL® Pigment	2 %		1 kg
	Total:	**100 %**	**Average consumption: 1.7 kg/m² per mm thickness**	**39 kg**
4	SILIKAL® BPO	1 – 6 % with ref. to no. 1		See “Hardener dosages” table for quantities

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SILIKAL® R 62

Reactive, slightly elasticised resin with very good self-levelling properties

Guideline recipe, colourless top coat

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 10 litre bucket
1	SILIKAL® R 62	100 %		10 kg
	Total:	**100 %**	**Average consumption: 600 g/m²**	**10 kg**
2	SILIKAL® BPO	1 – 6 % with ref. to no. 1		See “Hardener dosages” table for quantities

Characteristics as delivered

Property	Approx. value
Viscosity, +20 °C	200 mPa · s
Density, +20 °C	0.98 g/cm³
Application temperature	0 °C to +30 °C

CE marking

CE
09
SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
R62-001
EN 13813:2002
Synthetic resin screed for application in buildings

Reaction to fire	E_{fl}
Release of corrosive substances	SR
Wear resistance	≤ AR1
Bond strength	≥ 1.5
Impact resistance	≥ IR 4

CE
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SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
System-C-001
EN 1504-2:2004 1119
ZA.1d(1.3), ZA.1f(5.1) and ZA.1g(6.1)
Synthetic resin screed for application in buildings
Detailed declaration of performance: www.silikal.com

Other applicable documents

SILIKAL® BPO	Data sheet BPO
SILIKAL® Filler SV	Data sheet FSV
SILIKAL® Pigment	Data sheet PIG
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

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SILIKAL® R 63

Reactive, slightly elasticised resin for self-levelling coatings
VOC-reduced

Properties

- Very good self-levelling properties
- Easy to process
- Medium viscosity
- Good wetting characteristics
- VOC-reduced (according to AgBB scheme)

Area of application

- Main coat resin for self-levelling coatings in dry areas without slope for systems with low VOC emission
- Depending on mechanical, thermal or chemical load, the coating thickness can be varied from 2 to 4 mm

Hardener dosages

Temperature	SILIKAL® BPO % by weight *	Pot life approx. min.	Hardening time approx. min.
+10 °C	2.0	17	60
+20 °C	2.0	12	50
+25 °C	1.5	10	40
+30 °C	1.0	10	40

* The amount of SILIKAL® BPO is always calculated with reference to the amount of resin.

Advice on application

- First the fillers and pigments need to be stirred into the resin until a homogeneous state is achieved (no lumps) and only then SILIKAL® should BPO be added and mixed until it has dissolved completely (approx. 1 minute). The mixture should be used immediately.
- For coatings with broadcast, e.g. with SILIKAL® Flakes, always broadcast until saturation, until there are no glossy areas remaining. Once the main coat has cured, sweep or vacuum away any loose grains of flakes.

Guideline recipe, self-levelling coating 2 – 4 mm for indoor spaces

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 30 litre bucket
1	SILIKAL® R 63	33 %		13 kg
2	SILIKAL® Filler SV	65 %	1 sack	25 kg
3	SILIKAL® Pigment	2 %		1 kg
	Total:	**100 %**	**Average consumption: 1.7 kg/m² per mm thickness**	**39 kg**
4	SILIKAL® BPO	1 – 2 % with ref. to no. 1		See “Hardener dosages” table for quantities

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Ostring 23 · 63533 Mainhausen · Germany
Tel.: +49 (0) 61 82 / 92 35-0
mail@silikal.de · www.silikal.de

SILIKAL® R 63

Reactive, slightly elasticised resin for self-levelling coatings
VOC-reduced

Characteristics as delivered

Property	Approx. value
Viscosity, +20 °C	250 mPa · s
Density, +20 °C	0.98 g/cm³
Application temperature	+10 °C to +30 °C

CE marking

CE
09
SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
R63-001
EN 13813:2002
Synthetic resin screed
for application in buildings

Reaction to fire	E_{fl}
Release of corrosive substances	SR
Wear resistance	≤ AR1
Bond strength	≥ 1.5
Impact resistance	≥ IR 4

CE
09
SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
System-CL-001
EN 1504-2:2004 1119
ZA.1d(1.3), ZA.1f(5.1) and ZA.1g(6.1)
Synthetic resin screed
for application in buildings
Detailed declaration of performance:
www.silikal.com

Other applicable documents

SILIKAL® BPO	Data sheet BPO
SILIKAL® Filler SV	Data sheet FSV
SILIKAL® Pigment	Data sheet PIG
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

Silikal GmbH
Ostring 23 · 63533 Mainhausen · Germany
Tel.: +49 (0) 61 82 / 92 35-0
mail@silikal.de · www.silikal.de

SILIKAL® R 64

Reactive resin for trowel-applied coloured quartz coatings indoors

Properties

- Medium viscosity
- High firmness
- Good filler wetting

Area of application

- Main coat resin for trowelled coatings indoors for use in Silikal System B: Quartz TA on concrete and cement screed
- Also suitable for areas with increased slope
- Depending on mechanical, thermal or chemical load, the coating thickness can be varied from 3 to 5 mm

Hardener dosages

Temperature	SILIKAL® BPO % by weight *	Pot life approx. min.	Hardening time approx. min.
0 °C	6.0	20	50
+10 °C	5.0	20	45
+20 °C	2.5	15	40
+30 °C	1.5	12	30

* The amount of SILIKAL® BPO is always calculated with reference to the amount of resin.

Advice on application

- SILIKAL® BPO must first be added and mixed until it has fully dissolved. The fillers must then be stirred in until a homogeneous state has been reached and the mixture must be used immediately.
- The trowelable coloured quartz screed should be pre-spread to the desired coating thickness with a rake and then needs to be well compacted with a smoothing trowel.

Guideline recipe, coloured quartz topping 3 – 5 mm:

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 30 litre bucket
1	SILIKAL® R 64	22 %		7 kg
2	SILIKAL® Filler FM	78 %	1 sack	25 kg
	Total:	**100 %**	**Average consumption: 2 kg/m² per mm thickness**	**32 kg**
4	SILIKAL® BPO	1.5 – 6 % with ref. to no. 1		See “Hardener dosages” table for quantities

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mail@silikal.de · www.silikal.de

Expect more from your floor.

SILIKAL® R 64

Reactive resin for trowel-applied coloured quartz coatings indoors

Characteristics as delivered

Property	Approx. value
Viscosity, +20 °C	300 mPa · s
Density, +20 °C	0.98 g/cm³
Application temperature	0 °C to +30 °C

CE marking

CE

09

SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com

R64-001

EN 13813:2002

Synthetic resin screed
for application in buildings

Reaction to fire	E_{fl}
Release of corrosive substances	SR
Wear resistance	≤ AR1
Bond strength	≥ 1.5
Impact resistance	≥ IR 4

Other applicable documents

SILIKAL® BPO	Data sheet BPO
SILIKAL® Filler FM	Data sheet FFM
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

Silikal GmbH
Ostring 23 · 63533 Mainhausen · Germany
Tel.: +49 (0) 61 82 / 92 35-0
mail@silikal.de · www.silikal.de

SILIKAL® R 69 C

Reactive, slightly elasticised resin for system SILIKAL® Concrete Look

Properties

- Medium viscosity
- Can be spread well with the smoothing trowel
- Promotes floating of the filler to achieve the desired concrete effect

Area of application

- Binding agent for the design layer in SILIKAL® Concrete Look

Hardener dosages

Temperature	SILIKAL® BPO % by weight *	Pot life approx. min.	Hardening time approx. min.
+10 °C	4.0	15	60
+15 °C	3.0	12	45
+20 °C	2.0	12	45
+30 °C	1.5	10	40

* The amount of SILIKAL® BPO is always calculated with reference to the amount of resin.

Advice on application

- The design layer is applied with the smoothing trowel in irregular sweeps and slightly different coating thicknesses to achieve the desired look.
- The appearance of the finished Concrete Look floor is always dependent on the specific application of the design layer as performed by the individual installer.
- First SILIKAL® Filler CL needs to be stirred into the resin until a homogeneous state is achieved (no lumps) and only then SILIKAL® BPO should be added and mixed until it has dissolved completely (approx. 1 minute), and the mixture should be used immediately.

Guideline recipe

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 30 litre bucket
1	SILIKAL® R 69 C	50 %		15 kg
2	SILIKAL® Filler CL	50 %	1 sack	15 kg
	Total:	**100 %**	**Average consumption: 2.5 kg/m²**	**30 kg**
3	SILIKAL® BPO	1.5 – 4 % with ref. to no. 1		See “Hardener dosages” table for quantities

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Tel.: +49 (0) 61 82 / 92 35-0
mail@silikal.de · www.silikal.de

SILIKAL® R 69 C

Reactive, slightly elasticised resin for system SILIKAL® Concrete Look

Characteristics as delivered

Property	Approx. value
Viscosity, +20 °C	400 mPa · s
Density, +20 °C	0.98 g/cm³
Application temperature	+10 °C to +30 °C

CE marking

CE
09
SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
R69-C-001
EN 13813:2002
Synthetic resin screed
for application in buildings

Reaction to fire	E_{fl}
Release of corrosive substances	SR
Wear resistance	≤ AR1
Bond strength	≥ 1.5
Impact resistance	≥ IR 4

CE
09
SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
System-CL-001
EN 1504-2:2004 1119
ZA.1d(1.3), ZA.1f(5.1) and ZA.1g(6.1)
Synthetic resin screed
for application in buildings
Detailed declaration of performance:
www.silikal.com

Other applicable documents

SILIKAL® BPO	Data sheet BPO
SILIKAL® Filler CL	Data sheet FCL
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

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SILIKAL® RV 368

Reactive, impact-resistant resin, flexible at low temperatures, for self-levelling coatings

Properties

- Medium viscosity
- Good self-levelling properties
- Good crack-bridging
- Good flexibility at low temperatures
- Permanently elastic

Area of application

- Main coat resin for flexible, self-levelling coatings outdoors and for cold-storage rooms
- Depending on mechanical, thermal or chemical load, the coating thickness can be varied from 2 to 7 mm
- As flexible scratch slurry to level out surface uneveness after priming

Hardener dosages

Temperature	SILIKAL® BPO % by weight *	Pot life approx. min.	Hardening time approx. min.
+5 °C	6.0	20	60
+10 °C	4.0	15	40
+20 °C	2.0	15	40
+30 °C	1.0	10	25

* The amount of SILIKAL® BPO is always calculated with reference to the amount of resin.

Advice on application

- First the fillers and pigments need to be stirred into the resin until a homogeneous state is achieved (no lumps) and only then SILIKAL® BPO should be added and mixed until it has dissolved completely (approx. 1 minute). The mixture should be used immediately.
- For broadcasted toppings, e.g. with SILIKAL® Filler FM, always broadcast surplus covering, until there are no glossy parts remaining. Once the main coat has cured, sweep or vacuum away any loose grains of sand.

Guideline recipe, scratch slurry

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 30 litre bucket
1	SILIKAL® RV 368	35 %		13.5 kg
2	SILIKAL® Filler SL	65 %	1 sack	25 kg
	Total:	**100 %**	**Average consumption: 1.6 kg/m² per mm thickness**	**38.5 kg**
3	SILIKAL® BPO	1 – 6 % with ref. to no. 1		See “Hardener dosages” table for quantities

Guideline recipe, self-levelling coating 2 – 4 mm

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 30 litre bucket
1	SILIKAL® RV 368	35 %		13.5 kg
2	SILIKAL® Filler SV	65 %	1 sack	25 kg
	Total:	**100 %**	**Average consumption: 1.6 kg/m² per mm thickness**	**38.5 kg**
3	SILIKAL® BPO	1 – 6 % with ref. to no. 1		See “Hardener dosages” table for quantities

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SILIKAL® RV 368

Reactive, impact-resistant resin, flexible at low temperatures, for self-levelling coatings

Guideline recipe, self-levelling coating 4 – 7 mm

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 30 litre bucket
1	SILIKAL® RV 368	30 %		16 kg
2	SILIKAL® Filler QM	20 %		10 kg
3	SILIKAL® Filler SL	50 %	1 sack	25 kg
	Total:	**100 %**	**Average consumption: 1.7 kg/m² per mm thickness**	**51 kg**
4	SILIKAL® BPO	1 – 6 % with ref. to no. 1		See “Hardener dosages” table for quantities

Characteristics as delivered

Property	Approx. value
Viscosity, +20 °C	1,000 mPa · s
Density, +20 °C	0.98 g/cm³
Application temperature	+5 °C to +30 °C

CE marking

CE
09
SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
RV368-001
EN 13813:2002
Synthetic resin screed for application in buildings

Reaction to fire	E_{fl}
Release of corrosive substances	SR
Wear resistance	≤ AR1
Bond strength	≥ 1.5
Impact resistance	≥ IR 4

CE
09
SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
System-D-001
EN 1504-2:2004 1119
ZA.1d(1.3), ZA.1f(5.1) and ZA.1g(6.1)
Synthetic resin screed for application in buildings
Detailed declaration of performance: www.silikal.com

Other applicable documents

SILIKAL® BPO	Data sheet BPO
SILIKAL® Filler SL	Data sheet FSL
SILIKAL® Filler SV	Data sheet FSV
SILIKAL® Filler QM	Data sheet FQM
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

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SILIKAL® R 68

Reactive, flexibilised, viscoplastic reactive resin for self-levelling coatings

Properties

- Medium viscosity
- Good self-levelling properties
- Good crack-bridging
- Good flexibility at low temperatures
- Permanently elastic
- Safe curing at higher substrate temperatures

Area of application

- Main coat resin for flexible, self-levelling coatings outdoors and in cold-storage rooms
- Depending on mechanical, thermal or chemical load, the coating thickness can be varied from 2 to 6 mm
- As flexible scratch slurry to level out surface uneveness after priming

Hardener dosages

Temperature	SILIKAL® BPO % by weight *	Pot life approx. min.	Hardening time approx. min.
+5 °C	6.0	20	60
+10 °C	4.0	15	50
+20 °C	3.0	15	40
+30 °C	2.0	10	25
+35 °C	1.5	8	20

* The amount of SILIKAL® BPO is always calculated with reference to the amount of resin.

Advice on application

- First the fillers and pigments need to be stirred into the resin until a homogeneous state is achieved (no lumps) and only then SILIKAL® BPO should be added and mixed until it has dissolved completely (approx. 1 minute). The mixture should be used immediately.
- For broadcasted toppings, e.g. with SILIKAL® Filler FM, always broadcast surplus covering, until there are no glossy parts remaining. Once the main coat has cured, sweep or vacuum away any loose grains of sand.
- SILIKAL® R 68 is subject to a prolonged post-reaction of roughly two hours. If SILIKAL® R 68 is used as a self-levelling coating/scratch slurry without broadcasting its entire surface, the coating will have a certain residual stickiness after the curing time. This does not, however, have any negative effect on following coatings (main coat/top coat).

Guideline recipe, scratch slurry

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 30 litre bucket
1	SILIKAL® R 68	35 %		13.5 kg
2	SILIKAL® Filler SL	65 %	1 sack	25 kg
	Total:	**100 %**	**Average consumption: 1.6 kg/m² per mm thickness**	**38.5 kg**
3	SILIKAL® BPO	1.5 – 6 % with ref. to no. 1		See “Hardener dosages” table for quantities

Guideline recipe, self-levelling main coat 2 – 3 mm

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 30 litre bucket
1	SILIKAL® R 68	35 %		13.5 kg
2	SILIKAL® Filler SL	65 %	1 sack	25 kg
	Total:	**100 %**	**Average consumption: 1.6 kg/m² per mm thickness**	**38.5 kg**
3	SILIKAL® BPO	1.5 – 6 % with ref. to no. 1		See “Hardener dosages” table for quantities

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SILIKAL® R 68

Reactive, flexibilised, viscoplastic reactive resin for self-levelling coatings

Guideline recipe, self-levelling main coat 4 – 6 mm

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 30 litre bucket
1	SILIKAL® R 68	30 %		10.7 kg
2	SILIKAL® Filler SL	70 %	1 sack	25 kg
	Total:	**100 %**	**Average consumption: 1.7 kg/m² per mm thickness**	**35.7 kg**
3	SILIKAL® BPO	1.5 – 6 % with ref. to no. 1		See “Hardener dosages” table for quantities

Characteristics as delivered

Property	Approx. value
Viscosity, +20 °C	300 mPa · s
Density, +20 °C	0.97 g/cm³
Application temperature	+5 °C to +35 °C

CE marking

CE

09

SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com

R68-001

EN 13813:2002

Synthetic resin screed
for application in buildings

Reaction to fire	E_{fl}
Release of corrosive substances	SR
Wear resistance	≤ AR1
Bond strength	≥ 1.5
Impact resistance	≥ IR 4

Other applicable documents

SILIKAL® BPO	Data sheet BPO
SILIKAL® Filler SL	Data sheet FSL
SILIKAL® Filler FM	Data sheet FFM
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

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SILIKAL® RU 320

Highly flexible reactive resin for membrane layers and waterproofing

Properties

- High viscosity
- High elasticity
- Very good crack bridging, permanent expansion capacity
- Good self-levelling properties

Area of application

- As membrane layer for crack bridging underneath of coatings
- As waterproofing layer under toppings (tiles, coatings)

Hardener dosages

Temperature	SILIKAL® BPO % by weight *	Pot life approx. min.	Hardening time approx. min.
0 °C	6.0	20	80
+10 °C	4.0	15	40
+20 °C	2.0	15	40
+30 °C	1.0	8	25

* The amount of SILIKAL® BPO is always calculated with reference to the amount of resin.

Advice on application

- First the fillers and pigments need to be stirred into the resin until a homogeneous state is achieved (no lumps) and only then SILIKAL® BPO should be added and mixed until it has dissolved completely (approx. 1 minute). The mixture should be used immediately.
- For waterproofing under tiles, the SILIKAL® RU 320 waterproofing layer must be spread in excess and after curing the loose grains of sand must be swept/vacuumed away before the tile adhesive is applied.

Guideline recipe, pigmented membrane layer

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 10 litre bucket
1	SILIKAL® RU 320	74 %		7.4 kg
2	SILIKAL® Filler QM	20 %		2.0 kg
3	SILIKAL® Pigment	5 %		500 g
4	SILIKAL® TA 2	1 %		100 g
	Total:	**100 %**	**Average consumption: 1.3 kg/m² per mm thickness**	**10 kg**
5	SILIKAL® BPO	1 – 6 % with ref. to no. 1		See “Hardener dosages” table for quantities

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Tel.: +49 (0) 61 82 / 92 35-0
mail@silikal.de · www.silikal.de

SILIKAL® RU 320

Highly flexible reactive resin for membrane layers and waterproofing

Characteristics as delivered

Property	Approx. value
Viscosity, +20 °C	400 mPa · s
Density, +20 °C	0.99 g/cm³
Application temperature	0 °C to +30 °C

CE marking

CE

09

SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com

RU320-001

EN 13813:2002

Synthetic resin screed
for application in buildings

Reaction to fire	E_{fl}
Release of corrosive substances	SR
Wear resistance	≤ AR1
Bond strength	≥ 1.5
Impact resistance	≥ IR 4

Other applicable documents

SILIKAL® BPO	Data sheet BPO
SILIKAL® Filler QM	Data sheet FQM
SILIKAL® TA 2	Data sheet TA2
SILIKAL® Pigment	Data sheet PIG
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

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Expect more from your floor.

SILIKAL® RU 320 Thix

Highly flexible, thixotropic, pigmented reactive resin for membrane layers and waterproofing

Properties

- High viscosity
- High elasticity
- Very good crack-bridging, permanent expansion capacity
- Good stability when used on vertical surfaces
- Pre-filled, pigmented and thixotropic ready to use

Area of application

- As stable membrane layer for crack bridging underneath coatings
- As stable waterproofing layer under toppings (tiles, coatings, with national technical test certificate (abP))

Hardener dosages

Temperature	SILIKAL® BPO % by weight *	Pot life approx. min.	Hardening time approx. min.
0 °C	6.0	20	80
+10 °C	4.0	15	60
+20 °C	2.0	15	60
+30 °C	1.0	8	40

* The amount of SILIKAL® BPO is always calculated with reference to the amount of resin.

Advice on application

- First stir well. Only after this SILIKAL® BPO should be added and mixed until it has dissolved completely (approx. 1 minute), and the mixture should be used immediately.

Guideline recipe, pigmented membrane layer

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 10 litre bucket
1	SILIKAL® RU 320 Thix	100 %		10 kg
	Total:	**100 %**	**Average consumption: 1.1 kg/m² per mm thickness**	**10 kg**
2	SILIKAL® BPO	1 – 6 % with ref. to no. 1		See “Hardener dosages” table for quantities

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Tel.: +49 (0) 61 82 / 92 35-0
mail@silikal.de · www.silikal.de

SILIKAL® RU 320 Thix

Highly flexible, thixotropic, pigmented reactive resin for membrane layers and waterproofing

Characteristics as delivered

Property	Approx. value
Viscosity, +20 °C	Pasty
Density, +20 °C	1.13 g/cm³
Application temperature	0 °C to +30 °C

CE marking

CE

09

SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com

RU320-Thix-001

EN 13813:2002

Synthetic resin screed
for application in buildings

Reaction to fire	E_{fl}
Release of corrosive substances	SR
Wear resistance	≤ AR1
Bond strength	≥ 1.5
Impact resistance	≥ IR 4

Other applicable documents

SILIKAL® BPO	Data sheet BPO
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

The information in this data sheet replaces all previous information about the product and its application. The application instructions as well as the technical data of the product are only guidelines. The buyer is responsible for the application and claims of third parties.

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Tel.: +49 (0) 61 82 / 92 35-0
mail@silikal.de · www.silikal.de

SILIKAL® RU 320 Pigmented

Highly flexible, pigmented reactive resin for membrane layers and waterproofing

Properties

- High viscosity
- High elasticity
- Very good crack bridging, permanent expansion capacity
- Good self-levelling properties
- Pre-filled and pigmented ready to use

Area of application

- As membrane layer for crack bridging underneath of coatings
- As waterproofing layer under toppings (tiles, coatings, with national technical test certificate (abP))

Hardener dosages

Temperature	SILIKAL® BPO % by weight *	Pot life approx. min.	Hardening time approx. min.
0 °C	6.0	20	80
+10 °C	4.0	15	60
+20 °C	2.0	15	60
+30 °C	1.0	8	40

* The amount of SILIKAL® BPO is always calculated with reference to the amount of resin.

Advice on application

- First stir well. Only after this SILIKAL® BPO should be added and mixed until it has dissolved completely (approx. 1 minute), and the mixture should be used immediately.

Guideline recipe

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 10 litre bucket
1	SILIKAL® RU 320 Pigmented	100 %		10 kg
	Total:	**100 %**	**Average consumption: 1.3 kg/m² per mm thickness**	**10 kg**
2	SILIKAL® BPO	1 – 6 % with ref. to no. 1		See “Hardener dosages” table for quantities

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Ostring 23 · 63533 Mainhausen · Germany
Tel.: +49 (0) 61 82 / 92 35-0
mail@silikal.de · www.silikal.de

SILIKAL® RU 320 Pigmented

Highly flexible, pigmented reactive resin for membrane layers and waterproofing

Characteristics as delivered

Property	Approx. value
Viscosity, +20 °C	2,500 mPa · s
Density, +20 °C	1.13 g/cm³
Application temperature	0 °C to +30 °C

CE marking

CE
09
SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
RU320-pigmented-001
EN 13813:2002
Synthetic resin screed
for application in buildings

Reaction to fire	E_{fl}
Release of corrosive substances	SR
Wear resistance	≤ AR1
Bond strength	≥ 1.5
Impact resistance	≥ IR 4

CE
09
SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
System-Küche-001
EN 1504-2:2004 1119
ZA.1d(1.3), ZA.1f(5.1) and ZA.1g(6.1)
Synthetic resin screed
for application in buildings
Detailed declaration of performance:
www.silikal.com

Other applicable documents

SILIKAL® BPO	Data sheet BPO
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

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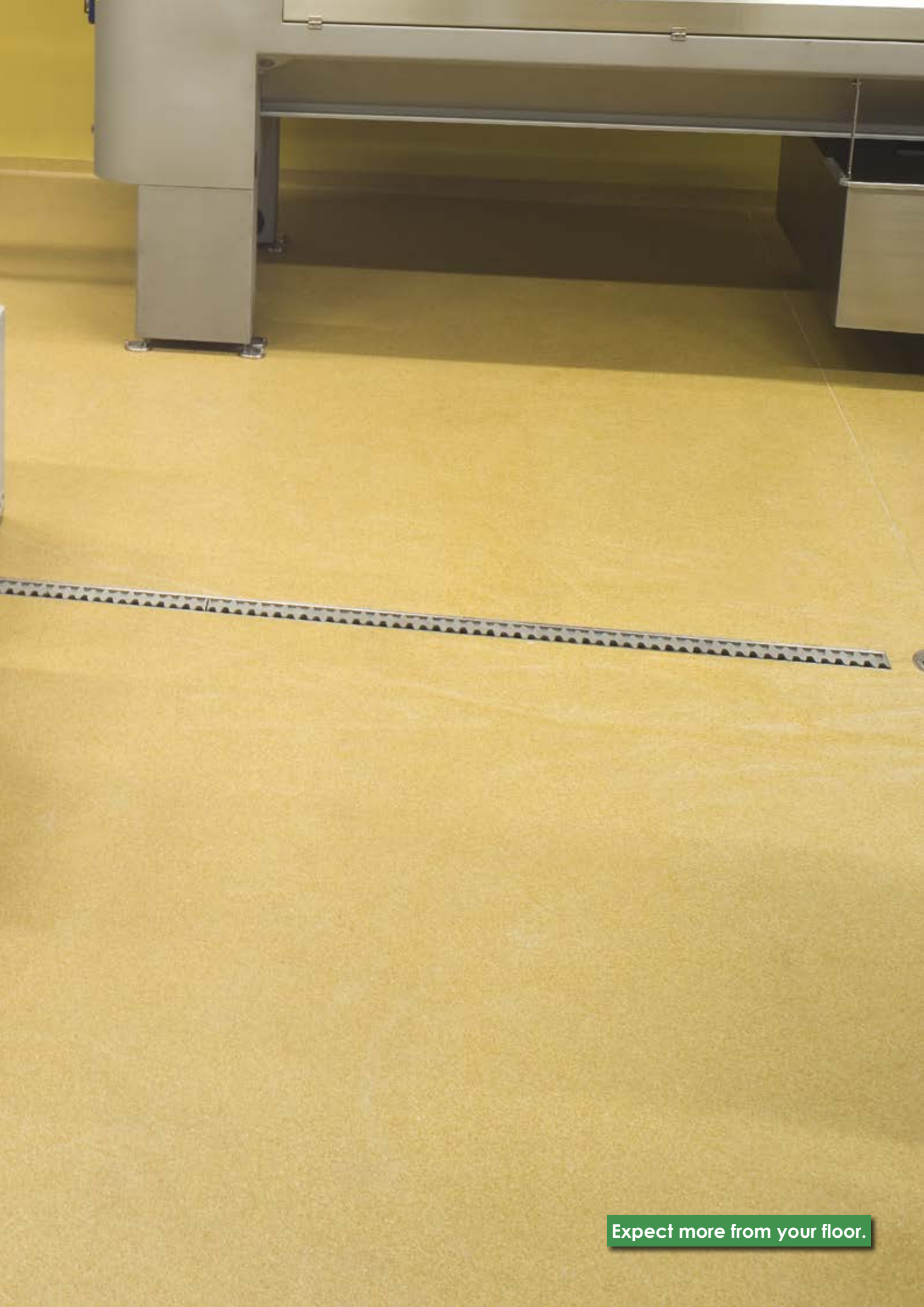
Vorsicht Glas!


Expect more from your floor.

SILIKAL® R 71

Reactive, hard top coat

Properties

- Extremely low viscosity
- Cures hard, good scratch resistance
- Low yellowing
- Very good chemical resistance

Area of application

- Colourless top coat for decorative, hard coloured flake/ coloured quartz main coats

Hardener dosages

Temperature	SILIKAL® BPO % by weight *	Pot life approx. min.	Hardening time approx. min.
-5 °C	5.0	25	60
0 °C	4.0	17	40
+20 °C	2.0	15	30
+30 °C	1.0	8	15

* The amount of SILIKAL® BPO is always calculated with reference to the amount of resin.

Advice on application

- Stir in SILIKAL® BPO until it is fully dissolved (approx. 1 minute) and then use the mixture immediately.
- Always roll on at least 400 g/m² for the first top coat layer. Optionally, after the first coating has cured, a second top coat can be rolled on with no more than 300 g/m².
- Roll on crosswise with a suitable roller.

Guideline recipe, colourless top coat

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 10 litre bucket
1	SILIKAL® R 71	100 %		10 kg
	Total:	**100 %**	**Average consumption: 400 – 500 g/m²**	**10 kg**
2	SILIKAL® BPO	1 – 5 % with ref. to no. 1		See “Hardener dosages” table for quantities

Silikal GmbH
Ostring 23 · 63533 Mainhausen · Germany
Tel.: +49 (0) 61 82 / 92 35-0
mail@silikal.de · www.silikal.de

SILIKAL® R 71

Reactive, hard top coat

Characteristics as delivered

Property	Approx. value
Viscosity, +20 °C	70 mPa · s
Density, +20 °C	0.99 g/cm³
Application temperature	-5 °C to +30 °C

CE marking

CE
09
SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
R71-001
EN 13813:2002
Synthetic resin screed
for application in buildings

Reaction to fire	E_{fl}
Release of corrosive substances	SR
Wear resistance	≤ AR1
Bond strength	≥ 1.5
Impact resistance	≥ IR 4

CE
09
SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
System-Küche-001
EN 1504-2:2004 1119
ZA.1d(1.3), ZA.1f(5.1) and ZA.1g(6.1)
Synthetic resin screed
for application in buildings
Detailed declaration of performance:
www.silikal.com

Other applicable documents

SILIKAL® BPO	Data sheet BPO
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

The information in this data sheet replaces all previous information about the product and its application. The application instructions as well as the technical data of the product are only guidelines. The buyer is responsible for the application and claims of third parties.

Silikal GmbH
Ostring 23 · 63533 Mainhausen · Germany
Tel.: +49 (0) 61 82 / 92 35-0
mail@silikal.de · www.silikal.de

SILIKAL® R 72

Reactive, hard top coat

Properties

- Medium viscosity
- Cures hard, good scratch resistance
- Low yellowing
- Very good chemical resistance

Area of application

- Colourless top coat for decorative, hard coloured flake/ coloured quartz main coats

Hardener dosages

Temperature	SILIKAL® BPO % by weight *	Pot life approx. min.	Hardening time approx. min.
+10 °C	4.0	15	40
+15 °C	3.0	15	40
+20 °C	2.0	12	30
+30 °C	1.0	10	30

* The amount of SILIKAL® BPO is always calculated with reference to the amount of resin.

Advice on application

- Stir in SILIKAL® BPO until it is fully dissolved (approx. 1 minute) and then use the mixture immediately.
- Always roll on at least 400 g/m² for the first top coat layer. Optionally, after the first coating has cured, a second top coat can be rolled on with no more than 300 g/m².
- Roll on crosswise with a suitable roller.

Guideline recipe, colourless top coat

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 10 litre bucket
1	SILIKAL® R 72	100 %		10 kg
	Total:	**100 %**	**Average consumption: 400 – 500 g/m²**	**10 kg**
2	SILIKAL® BPO	1 – 4 % with ref. to no. 1		See “Hardener dosages” table for quantities

Silikal GmbH
Ostring 23 · 63533 Mainhausen · Germany
Tel.: +49 (0) 61 82 / 92 35-0
mail@silikal.de · www.silikal.de

SILIKAL® R 72

Reactive, hard top coat

Characteristics as delivered

Property	Approx. value
Viscosity, +20 °C	150 mPa · s
Density, +20 °C	0.97 g/cm³
Application temperature	+10 °C to +30 °C

CE marking

CE
09
SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
R72-001
EN 13813:2002
Synthetic resin screed
for application in buildings

Reaction to fire	E_{fl}
Release of corrosive substances	SR
Wear resistance	≤ AR1
Bond strength	≥ 1.5
Impact resistance	≥ IR 4

CE
09
SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
System-C-001
EN 1504-2:2004 1119
ZA.1d(1.3), ZA.1f(5.1) and ZA.1g(6.1)
Synthetic resin screed
for application in buildings
Detailed declaration of performance:
www.silikal.com

Other applicable documents

SILIKAL® BPO	Data sheet BPO
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

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mail@silikal.de · www.silikal.de

SILIKAL® R 73

Reactive, hard top coat, low VOC

Properties

- Medium viscosity
- Cures hard, good scratch resistance
- Low yellowing
- Very good chemical resistance
- VOC-reduced (according to AgBB scheme)

Area of application

- Colourless top coat for decorative, hard coloured flake/ coloured quartz main coats for systems with low VOC emission

Hardener dosages

Temperature	SILIKAL® BPO % by weight *	Pot life approx. min.	Hardening time approx. min.
+10 °C	2.0	15	40
+15 °C	2.0	12	30
+20 °C	1.5	10	30
+30 °C	1.0	8	25

* The amount of SILIKAL® BPO is always calculated with reference to the amount of resin.

Advice on application

- Stir in SILIKAL® BPO until it is fully dissolved (approx. 1 minute) and then use the mixture immediately.
- Always roll on at least 400 g/m² for the first top coat layer. Optionally, after the first coating has cured, a second top coat can be rolled on with no more than 300 g/m².
- Roll on crosswise with a suitable roller.

Guideline recipe, colourless top coat

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 10 litre bucket
1	SILIKAL® R 73	100 %		10 kg
	Total:	**100 %**	**Average consumption: 400 – 500 g/m²**	**10 kg**
2	SILIKAL® BPO	1 – 2 % with ref. to no. 1		See “Hardener dosages” table for quantities

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Ostring 23 · 63533 Mainhausen · Germany
Tel.: +49 (0) 61 82 / 92 35-0
mail@silikal.de · www.silikal.de

SILIKAL® R 73

Reactive, hard top coat, low VOC

Characteristics as delivered

Property	Approx. value
Viscosity, +20 °C	90 mPa · s
Density, +20 °C	0.97 g/cm³
Application temperature	+10 °C to +30 °C

CE marking

CE
09
SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
R73-001
EN 13813:2002
Synthetic resin screed
for application in buildings

Reaction to fire	E_{fl}
Release of corrosive substances	SR
Wear resistance	≤ AR1
Bond strength	≥ 1.5
Impact resistance	≥ IR 4

CE
09
SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
System-CL-001
EN 1504-2:2004 1119
ZA.1d(1.3), ZA.1f(5.1) and ZA.1g(6.1)
Synthetic resin screed
for application in buildings
Detailed declaration of performance:
www.silikal.com

Other applicable documents

SILIKAL® BPO	Data sheet BPO
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

The information in this data sheet replaces all previous information about the product and its application. The application instructions as well as the technical data of the product are only guidelines. The buyer is responsible for the application and claims of third parties.

Silikal GmbH
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Tel.: +49 (0) 61 82 / 92 35-0
mail@silikal.de · www.silikal.de

SILIKAL® R 82

Reactive, elasticised top coat

Properties

- Low viscosity
- Slightly flexible when cured
- Low yellowing
- Very good resistance to white discolouration caused by warm water

Area of application

- Colourless top coat for decorative coloured flake/coloured quartz main coats, also outdoors
- Top coats for main coats in wet rooms

Hardener dosages

Temperature	SILIKAL® BPO % by weight *	Pot life approx. min.	Hardening time approx. min.
+5 °C	3.0	20	45
+10 °C	3.0	18	40
+20 °C	2.0	12	30
+30 °C	1.0	8	20

* The amount of SILIKAL® BPO is always calculated with reference to the amount of resin.

Advice on application

- Stir in SILIKAL® BPO until it is fully dissolved (approx. 1 minute) and then use the mixture immediately.
- Always roll on at least 400 g/m² for the first top coat layer. Optionally, after the first coating has cured, a second top coat can be rolled on with no more than 300 g/m².
- Roll on crosswise with a suitable roller.

Guideline recipe, colourless top coat

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 10 litre bucket
1	SILIKAL® R 82	100 %		10 kg
	Total:	**100 %**	**Average consumption: 400 – 500 g/m²**	**10 kg**
2	SILIKAL® BPO	1 – 3 % with ref. to no. 1		See “Hardener dosages” table for quantities

Silikal GmbH
Ostring 23 · 63533 Mainhausen · Germany
Tel.: +49 (0) 61 82 / 92 35-0
mail@silikal.de · www.silikal.de

SILIKAL® R 82

Reactive, elasticised top coat

Characteristics as delivered

Property	Approx. value
Viscosity, +20 °C	200 mPa · s
Density, +20 °C	0.98 g/cm³
Application temperature	+5 °C to +30 °C

CE marking

CE
09
SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
R82-001
EN 13813:2002
Synthetic resin screed
for application in buildings

Reaction to fire	E_{fl}
Release of corrosive substances	SR
Wear resistance	≤ AR1
Bond strength	≥ 1.5
Impact resistance	≥ IR 4

CE
09
SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
System-Küche-Alternativ-001
EN 1504-2:2004 1119
ZA.1d(1.3), ZA.1f(5.1) and ZA.1g(6.1)
Synthetic resin screed
for application in buildings
Detailed declaration of performance:
www.silikal.com

Other applicable documents

SILIKAL® BPO	Data sheet BPO
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

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Silikal GmbH
Ostring 23 · 63533 Mainhausen · Germany
Tel.: +49 (0) 61 82 / 92 35-0
mail@silikal.de · www.silikal.de

SILIKAL® RF 6200 / Base

Reactive, pigmented, slightly elasticised top coat.
Alternatively, also available as non-pigmented, pre-filled base variant.

Properties

- Medium viscosity
- Very good self-levelling properties
- Pre-filled and pigmented ready to use or just pre-filled
- Slightly flexible when cured

Area of application

- Coloured top coat for broadcasted main coats indoors and outdoors

Hardener dosages

Temperature	SILIKAL® BPO % by weight *	Pot life approx. min.	Hardening time approx. min.
0 °C	6.0	20	50
+10 °C	4.0	20	45
+20 °C	2.0	15	40
+30 °C	1.0	12	30

* The amount of SILIKAL® BPO is always calculated with reference to the amount of resin.

Advice on application

- First SILIKAL® RF 6200 needs to be stirred and only then SILIKAL® BPO should be added and mixed until it has dissolved completely (approx. 1 minute). The mixture should be used immediately.
- For SILIKAL® RF 6200 Base, SILIKAL® Pigment must first be stirred into the resin until an homogeneous state is achieved (no lumps) and only then SILIKAL® BPO should be added and mixed until it has dissolved completely (approx. 1 minute). The mixture should be used immediately.
- Always roll on at least 600 g/m² for the first top coat layer. Optionally, after the first layer has cured, a second top coat can be rolled on with at least 500 g/m².

Guideline recipe, rollable top coat (factory pigmented)

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 10 litre bucket
1	SILIKAL® RF 6200	100 %		12 kg
	Total:	**100 %**	**Average consumption: 0.6 – 1.1 kg/m²**	**12 kg**
2	SILIKAL® BPO	1 – 6 % with ref. to no. 1		See “Hardener dosages” table for quantities

Guideline recipe, rollable top coat with SILIKAL® RF 6200 Base

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 10 litre bucket
1	SILIKAL® RF 6200 Base	90 – 95 %		10.8 – 11.4 kg
2	SILIKAL® Pigment*	5 – 10 %		0.6 – 1.2 kg
	Total:	**100 %**	**Average consumption: 0.6 – 1.1 kg/m²**	**11.4 – 12.6 kg**
3	SILIKAL® BPO	1 – 6 % with ref. to no. 1		See “Hardener dosages” table for quantities

* The pigment preparation (colour paste / pigment powder) must be suitable for dying MMA resins. Appropriate preliminary tests must be carried out to check the suitability. A compatibility table for standard pigments is given in the MMA technical documentation.

Silikal GmbH
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Tel.: +49 (0) 61 82 / 92 35-0
mail@silikal.de · www.silikal.de

SILIKAL® RF 6200 / Base

Reactive, pigmented, slightly elasticised top coat.
Alternatively, also available as non-pigmented, pre-filled base variant.

Characteristics as delivered

Property	Approx. value
Viscosity, +20 °C	500 mPa · s
Density, +20 °C	1.20 g/cm³
Application temperature	0 °C to +30 °C

CE marking

CE
09
SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
RF6200-001
EN 13813:2002
Synthetic resin screed
for application in buildings

Reaction to fire	E_{fl}
Release of corrosive substances	SR
Wear resistance	≤ AR1
Bond strength	≥ 1.5
Impact resistance	≥ IR 4

CE
09
SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
System-OS8-MMA-001
EN 1504-2:2004 1119
ZA.1d(1.3), ZA.1f(5.1) and ZA.1g(6.1)
Synthetic resin screed
for application in buildings
Detailed declaration of performance:
www.silikal.com

Other applicable documents

SILIKAL® BPO	Data sheet BPO
SILIKAL® Pigment	Data sheet PIG
Compatibility table, pigments	Technical documentation MMA
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

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Ostring 23 · 63533 Mainhausen · Germany
Tel.: +49 (0) 61 82 / 92 35-0
mail@silikal.de · www.silikal.de

SILIKAL® RF 6250 / Base

Reactive, pigmented, slightly elasticised top coat on vertical surfaces. Alternatively, also available as non-pigmented, pre-filled base variant.

Properties

- High viscosity
- Can be rolled onto vertical surfaces
- Pre-filled and pigmented ready to use or just pre-filled
- Slightly flexible when cured

Area of application

- Coloured top coat of vertical surfaces

Hardener dosages

Temperature	SILIKAL® BPO % by weight *	Pot life approx. min.	Hardening time approx. min.
0 °C	6.0	20	50
+10 °C	4.0	20	45
+20 °C	2.0	15	40
+30 °C	1.0	12	30

* The amount of SILIKAL® BPO is always calculated with reference to the amount of resin.

Advice on application

- First SILIKAL® RF 6250 needs to be stirred and only then SILIKAL® BPO should be added and mixed until it has dissolved completely (approx. 1 minute). The mixture should be used immediately.
- For SILIKAL® RF 6250 Base, SILIKAL® Pigment first needs to be stirred into the resin until an homogeneous state is achieved (no lumps) and only then SILIKAL® BPO should be added and mixed until it has dissolved completely (approx. 1 minute). The mixture should be used immediately.
- Prior priming with SILIKAL® RU 380, for example, is required.
- Always roll on at least 600 g/m² for the first top coat layer. Optionally, after the first layer has cured, a second top coat can be rolled on with at least 500 g/m².

Guideline recipe, rollable top coat (factory pigmented)

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 10 litre bucket
1	SILIKAL® RF 6250	100 %		12 kg
	Total:	**100 %**	**Average consumption: 0.6 – 1.1 kg/m²**	**12 kg**
2	SILIKAL® BPO	1 – 6 % with ref. to no. 1		See “Hardener dosages” table for quantities

Guideline recipe, rollable top coat with SILIKAL® RF 6250 Base

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 10 litre bucket
1	SILIKAL® RF 6250 Base	90 – 95 %		10.8 – 11.4 kg
2	SILIKAL® Pigment*	5 – 10 %		0.6 – 1.2 kg
	Total:	**100 %**	**Average consumption: 0.6 – 1.1 kg/m²**	**11.4 – 12.6 kg**
3	SILIKAL® BPO	1 – 6 % with ref. to no. 1		See “Hardener dosages” table for quantities

* The pigment preparation (colour paste / pigment powder) must be suitable for dying MMA resins. Appropriate preliminary tests must be carried out to check the suitability. A compatibility table for standard pigments is given in the MMA technical documentation.

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Tel.: +49 (0) 61 82 / 92 35-0
mail@silikal.de · www.silikal.de

SILIKAL® RF 6250 / Base

Reactive, pigmented, slightly elasticised top coat on vertical surfaces. Alternatively, also available as non-pigmented, pre-filled base variant.

Characteristics as delivered

Property	Approx. value
Viscosity, +20 °C	1,300 mPa · s
Density, +20 °C	1.20 g/cm³
Application temperature	0 °C to +30 °C

CE marking

CE
09
SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
RF6250-001
EN 13813:2002
Synthetic resin screed
for application in buildings

Reaction to fire	E_{fl}
Release of corrosive substances	SR
Wear resistance	≤ AR1
Bond strength	≥ 1.5
Impact resistance	≥ IR 4

CE
09
SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com
System-OS8-MMA-001
EN 1504-2:2004 1119
ZA.1d(1.3), ZA.1f(5.1) and ZA.1g(6.1)
Synthetic resin screed
for application in buildings
Detailed declaration of performance:
www.silikal.com

Other applicable documents

SILIKAL® BPO	Data sheet BPO
SILIKAL® Pigment	Data sheet PIG
Compatibility table, pigments	Technical documentation MMA
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

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Tel.: +49 (0) 61 82 / 92 35-0
mail@silikal.de · www.silikal.de

SILIKAL® RF 7000

Reactive, pigmented, hard top coat

Properties

- Medium viscosity
- Low yellowing
- Hard top coat
- Good chemical resistance
- Pigmented ready to use

Area of application

- Top coat for broadcasted hard main coats indoors

Hardener dosages

Temperature	SILIKAL® BPO % by weight *	Pot life approx. min.	Hardening time approx. min.
+10 °C	4.0	20	45
+15 °C	3.0	15	45
+20 °C	2.0	15	40
+30 °C	1.0	12	30

* The amount of SILIKAL® BPO is always calculated with reference to the amount of resin.

Advice on application

- First stir. Only after this SILIKAL® BPO should be added and mixed until it has dissolved completely (approx. 1 minute). The mixture should be used immediately.
- Always roll on at least 600 g/m² for the first top coat layer. Optionally, after the first layer has cured, a second top coat can be rolled on with at least 500 g/m².
- Roll on crosswise with a suitable roller.

Guideline recipe, pigmented top coat

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 10 litre bucket
1	SILIKAL® RF 7000	100 %		12 kg
	Total:	**100 %**	**Average consumption: 0.6 – 1.1 kg/m²**	**12 kg**
2	SILIKAL® BPO	1 – 4 % with ref. to no. 1		See “Hardener dosages” table for quantities

Silikal GmbH
Ostring 23 · 63533 Mainhausen · Germany
Tel.: +49 (0) 61 82 / 92 35-0
mail@silikal.de · www.silikal.de

SILIKAL® RF 7000

Reactive, pigmented, hard top coat

Characteristics as delivered

Property	Approx. value
Viscosity, +20 °C	500 mPa · s
Density, +20 °C	1.2 g/cm³
Application temperature	+10 °C to +30 °C

CE marking

CE

09

SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com

RF7000-001

EN 13813:2002

Synthetic resin screed
for application in buildings

Reaction to fire	E_{fl}
Release of corrosive substances	SR
Wear resistance	≤ AR1
Bond strength	≥ 1.5
Impact resistance	≥ IR 4

Other applicable documents

SILIKAL® BPO	Data sheet BPO
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

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mail@silikal.de · www.silikal.de

SILIKAL® RF 8200

Reactive, pigmented, slightly elasticised top coat

Properties

- Medium viscosity
- Low yellowing
- Good film formation
- Pigmented ready to use
- Slightly flexible when cured

Area of application

- Top coat for broadcasted main coats indoors and outdoors
- Top coats for main coats in wet rooms

Hardener dosages

Temperature	SILIKAL® BPO % by weight *	Pot life approx. min.	Hardening time approx. min.
+5 °C	3.0	20	50
+10 °C	3.0	18	45
+20 °C	2.0	12	30
+30 °C	1.0	8	20

* The amount of SILIKAL® BPO is always calculated with reference to the amount of resin.

Advice on application

- First stir. Only after this SILIKAL® BPO should be added and mixed until it has dissolved completely (approx. 1 minute). The mixture should be used immediately.
- Always roll on at least 600 g/m² for the first top coat layer. Optionally, after the first layer has cured, a second top coat can be rolled on with at least 500 g/m².
- Roll on crosswise with a suitable roller.

Guideline recipe, pigmented top coat

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 10 litre bucket
1	SILIKAL® RF 8200	100 %		12 kg
	Total:	**100 %**	**Average consumption: 0.6 – 1.1 kg/m²**	**12 kg**
2	SILIKAL® BPO	1 – 3 % with ref. to no. 1		See “Hardener dosages” table for quantities

Silikal GmbH
Ostring 23 · 63533 Mainhausen · Germany
Tel.: +49 (0) 61 82 / 92 35-0
mail@silikal.de · www.silikal.de

SILIKAL® RF 8200

Reactive, pigmented, slightly elasticised top coat

Characteristics as delivered

Property	Approx. value
Viscosity, +20 °C	400 mPa · s
Density, +20 °C	1.21 g/cm³
Application temperature	+5 °C to +30 °C

CE marking

CE

09

SILIKAL GmbH
Ostring 23 · 63533 Mainhausen
www.silikal.com

RF8200-001

EN 13813:2002

Synthetic resin screed
for application in buildings

Reaction to fire	E_{fl}
Release of corrosive substances	SR
Wear resistance	≤ AR1
Bond strength	≥ 1.5
Impact resistance	≥ IR 4

Other applicable documents

SILIKAL® BPO	Data sheet BPO
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

Silikal GmbH
Ostring 23 · 63533 Mainhausen · Germany
Tel.: +49 (0) 61 82 / 92 35-0
mail@silikal.de · www.silikal.de

Expect more from your floor.

SILIKAL® RE 77

Reactive top coat, epoxy-resin-based

Properties

- High viscosity
- Hard, good scratch resistance
- Low yellowing
- Good resistance to solvents

Area of application

- Colourless top coat for decorative, hard coloured flake / coloured quartz main coats where solvent-resistance is required

Mixing ratio

Temperature	Component A	Component B	Processing time approx. min.	Hardening time Approx.
+15 °C	100 parts by weight	50 parts by weight	45	Can be walked over after 48 hours; driven over after 4 days; chemical 7 days
+20 °C			30	Can be walked over after 24 hours; driven over after 3 days; chemical 7 days
+30 °C			20	Can be walked over after 12 hours; driven over after 2 days; chemical 7 days

Advice on application

- SILIKAL® RE 77 consists of two liquid components (mixing ratio 1:2). The components must be mixed by thorough stirring for 2 – 3 minutes. To avoid unmixed resin residue on the edge of the mixing container, the finished mixture must be transferred to a new container and mixed for a further 1 – 2 minutes.

Guideline recipe

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 30 litre bucket
1	SILIKAL® Porfil RE 77 A	67 %	1 packing unit, comp. A	20 kg
2	SILIKAL® Porfil RE 77 B	33 %	1 packing unit, comp. B	10 kg
	Total:	**100 %**	**Average consumption: 500 g/m²**	**30 kg**

Characteristics as delivered

Property	Approx. value
Viscosity, component A, +20 °C	1,400 mPa · s
Viscosity, component B, +20 °C	250 mPa · s
Density, component A, +20 °C	1.14 g/cm³
Density, component B, +20 °C	1.02 g/cm³
Application temperature	+15 °C to +30 °C

Other applicable documents

General notes
Safety data sheets
Technical documentation MMA
All used Silikal products

Silikal GmbH
Ostring 23 · 63533 Mainhausen · Germany
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SILIKAL® HK 31

Reactive, low-yellowing, transparent coving paste

Properties

- Ready for use, transparent, pasty
- Good flexibility
- Good filling properties
- Reactive
- Low-yellowing

Area of application

- Creating covings and triangular covings in wet and dry areas

Hardener dosages

Temperature	SILIKAL® BPO % pbw. *	Pot life approx. min.	Hardening time approx. min.
0 °C	4.5	25	60
+10 °C	3.0	20	45
+20 °C	1.5	18	40
+30 °C	1.0	12	30

* The quantity of SILIKAL® BPO is always related to the quantity of resin.

Advice on application

- First stir in SILIKAL® BPO until completely dissolved (approx. 2 minutes) and only then mix in the filler, e.g. SILIKAL® FM 0.7 – 1.2 mm, and use the mixture immediately.
- Maximum coat thickness per application 10 mm; if thicker coats are required, apply more than one coat (always allowing each individual coat to cure fully).
- A mixture of 9 kg SILIKAL® Filler FS, FM or QS, 0.7 – 1.2 mm, and 3 kg SILIKAL® HK 31 is sufficient for approx. 5 – 6 linear meters of coving with leg dimensions of approx. 10 cm height (wall) and approx. 5 cm width (floor).

Guideline recipe

Item	Component	Guideline recipe (% by weight)	Comments	Batch for 10 litre bucket
1	SILIKAL® HK 31	25 %		3 kg
2	SILIKAL® Filler FS, FM or QS, 0.7 – 1.2 mm	75 %		9 kg
	Total:	**100 %**	**Average consumption: 1.85 kg/litre coving volume**	**12 kg**
3	SILIKAL® BPO	1.0 – 4.5 % related to item 1		See “Hardener dosages” table for quantities

Characteristics as delivered

Property	Approx. value
Viscosity, +20 °C	22 mPa · s (pasty)
Density, +20 °C	1.02 g/cm³
Application temperature	0 °C to +30 °C

Other applicable documents

SILIKAL® BPO	Data sheet BPO
SILIKAL® Filler QS	Data sheet FQS
SILIKAL® Filler FM	Data sheet FFM
SILIKAL® Filler FS	Data sheet FFS
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

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SILIKAL® BPO

Hardening powder/initiator

Properties

- Free-flowing powder
- Starts the chemical reaction of Silikal MMA resins

Area of application

- Second component of Silikal MMA resins to start the chemical reaction

Advice on application

- **⚠ Never expose SILIKAL® BPO to direct heat or store it in the sun!**
- Stir in SILIKAL® BPO until it is fully dissolved (approx. 1 minute or approx. 2 minutes for temperatures below +5 °C) and then use the mixture immediately.
- Only use plastic scoops to remove from larger containers, never metal ones.
- Opened containers must be closed after use.
- The hardener dosage is based on the “Hardener dosages” tables in the data sheets of the individual resins.

Other applicable documents

Corresponding Silikal resin	Data sheet
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

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SILIKAL® R 17

Reactive resin mortar for concrete repairs and screed

Properties

- High compressive strength (75 N/mm²)
- High tensile strength in bending (17 N/mm²)
- Low shrinkage
- Wear-resistant
- Good self levelling properties
- Processing time / hardening time at +20 °C: 15 min / 1 h

Area of application

- Reactive resin mortar indoors and outdoors

Guide for application and calculation

SILIKAL® R 17	Amount in kg	Quantity in ltr.	Quantity in ltr. fixed volume	Minimum layer thickness in mm
a) SILIKAL® R 17 Powder SILIKAL® R 17 Hardener	15.00 1.85 16.85	11.50 2.00	8.50	6
b) SILIKAL® R 17 Powder SILIKAL® R 17 Hardener SILIKAL® Filler QS 2 – 8 mm	15.00 1.85 8.00 24.85	11.50 2.00 5.00	11.60	25
c) SILIKAL® R 17 Powder SILIKAL® R 17 Hardener SILIKAL® Filler QS 2 – 8 mm SILIKAL® Filler QS 8 – 16 mm	15.00 1.85 3.00 12.00 31.85	11.50 2.00 1.90 7.50	14.25	50

Advice on application

- First add hardener liquid, then slowly stir in the powder component, then (as required) add SILIKAL® Filler QS and stir for roughly 2 minutes until an homogeneous mortar is created, then use immediately.
- The minimum layer thickness is 6 mm – not extendable to zero.
- Do not use any fillers other than those named in the table “Guide for application and calculation”.
- Note: If priming must be performed at temperatures between -11 °C and -25 °C, the special product SILIKAL® R 51 (-25 °C) can be used (data sheet on request).

Characteristics as delivered

Property	Approx. value
Viscosity, +20 °C	1 mPa · s
Density, +20 °C	0.93 g/cm³
Application temperature	-10 °C to +35 °C

CE marking

CE

05

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DOP: www.silikal.com

R17-001

EN 13813:2002

SR–C70–F15–B2,0–IR4–AR0,5–B_{fl}-s1

Synthetic resin screed
for application in buildings

Flexural strength	> 17 N/mm²
Compressive strength	> 75 N/mm²
Bond strength	B 2.0
Impact resistance	IR 0.4
Reaction to fire	B_{fl}-s1

Other applicable documents

SILIKAL® Filler QS	Data sheet FQS
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

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SILIKAL® R 15

Flexibilised reactive resin mortar for repairs and screed outdoors

Properties

- Adjusts to slight substrate movements
- Elasticity also prevents shrinkage cracks
- High compressive strength (30 N/mm²)
- Good self-levelling
- Processing time / hardening time at +20 °C: 15 min / 35 min

Area of application

- Reactive resin mortar for asphalt and concrete repairs outdoors

Guide for application and calculation

Coating thickness in mm	SILIKAL® R 15	Quantity in kg	Quantity in ltr.	Quantity in ltr. fixed volume
5 – 30	SILIKAL® R 15 Hardener SILIKAL® R 15 Powder	3 15 18	3 11	9
20 – 80	SILIKAL® R 15 Hardener SILIKAL® R 15 Powder SILIKAL® Filler QS 2 – 8 mm	3 15 5 23	3 11 3	11
>80	Install in layers			

Advice on application

- First add hardener liquid, then slowly stir in the powder component, then (as required) add Silikal® Filler QS and stir for approx. 2 minutes until an homogeneous mortar is created, then use immediately.
- The minimum layer thickness is 5 mm – not extendable to zero.
- Do not use any fillers other than those named in the table “Guide for application and calculation”.
- Note: For indoor applications, the Silikal® R 15I mortar can be used, which is also flexibilised (data sheet on request).

Characteristics as delivered

Property	Approx. value
Viscosity, +20 °C	60 mPa · s
Density, +20 °C	0.98 g/cm³
Application temperature	0 °C to +35 °C

Other applicable documents

SILIKAL® Filler QS	Data sheet FQS
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

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SILIKAL® Additive ZA

Low-temperature accelerator

Properties

- Increases reactivity at low temperatures for certain Silikal reactive resins
- Low viscosity

Area of application

- Additive for selected Silikal resins if they are to be cured under the minimum temperatures specified in the relevant data sheets
- The resin must be cooled down in advance to the temperature at which it is to be used

Additional quantity of SILIKAL® Additive ZA to be added, example: SILIKAL® R 62

Temperature	SILIKAL® Additive ZA % by weight	SILIKAL® BPO % by weight *	Pot life approx. min.	Hardening time approx. min.
-25 °C	3.0	6.0	31	90
-15 °C	1.5	6.0	20	60
-5 °C	0.5	6.0	18	50

* The amount of SILIKAL® BPO is always calculated with reference to the amount of resin.

Advice on application

- **⚠ Never allow SILIKAL® Additive ZA to be in direct contact with SILIKAL® BPO!**
- First stir in SILIKAL® Additive ZA until it has dissolved completely (approx. 5 minutes) and only then add the fillers and pigments until a homogeneous state is achieved (no lumps). After this, add and mix SILIKAL® BPO until it has dissolved completely (approx. 1 minute) and use the mixture immediately.
- The mixture of SILIKAL® fillers, for example, and other additives must be carried out in accordance with the tables in the Silikal resin data sheets.
- Please consult with Silikal application technology team to determine which resins SILIKAL® Additive ZA is appropriate for.

Guideline recipe, for example: SILIKAL® R 62, -15 °C, main coat, standard 3 – 4 mm

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 10 litre bucket
1	SILIKAL® R 62	33 %		13 kg
2	SILIKAL® Additive ZA	1.5 % with ref. to no. 1		195 g
3	SILIKAL® Filler SV	65 %	1 sack	25 kg
4	SILIKAL® Pigment	2 %		1 kg
	Total:	**100.5 %**	**Average consumption: 1.7 kg/m² per mm thickness**	**39.195 kg**
5	SILIKAL® BPO	6 % with ref. to no. 1		

Characteristics as delivered

Property	Approx. value
Viscosity, +20 °C	10 mPa · s
Density, +20 °C	0.96 g/cm³
Application temperature	-25 °C to -5 °C

Other applicable documents

Corresponding Silikal resin	Data sheet
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

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SILIKAL® Additive M

Adhesion promoter

Properties

– Improves adhesion

Area of application

– As additive for SILIKAL® RU 380 to improve adhesion on non-absorbent substrates such as tiles

– As additive for SILIKAL® R 54 to improve adhesion on slightly damp substrates

Hardener dosages for SILIKAL® RU 380 in combination with SILIKAL® Additive M

Temperature	SILIKAL® BPO % by weight *	Pot life approx. min.	Hardening time approx. min.
0 °C	4.0	34	55
+10 °C	3.0	20	50
+20 °C	2.5	13	40
+30 °C	2.0	11	35

* The amount of SILIKAL® BPO is always calculated with reference to the amount of resin.

Advice on application

– The maximum amount to be added is 0.3 weight %, calculated with reference to the amount of resin (maximum amount to be added to
1 kg SILIKAL® RU 380 is 3 grams, i.e. 0.003 kg).

– The amount of SILIKAL® BPO stated on the page SILIKAL® RU 380 for the particular temperature (table “Hardener dosages”) has been increased by 1% in each case for use with SILIKAL® Additive M.

– Silikal resins with SILIKAL® Additive M stirred in are not stable when stored and must be used immediately.

Guideline recipe

No.	Component	Guideline recipe (% by weight)	Comment	Batch for 10 litre bucket
1	SILIKAL® RU 380	100 %		10 kg
2	SILIKAL® Additive M	0.3 % with ref. to no. 1		30 g
	Total:	**100.3 %**	**Average consumption: 400 g/m²**	**10.03 kg**
3	SILIKAL® BPO	2 – 4 % with ref. to no. 1		See “Hardener dosages” table for quantities

Characteristics as delivered

Property	Approx. value
Viscosity, +20 °C	60 mPa · s
Density, +20 °C	1.21 g/cm³
Application temperature	0 °C to +30 °C

Other applicable documents

SILIKAL® BPO	Data sheet BPO
SILIKAL® RU 380	Data sheet RU 380
SILIKAL® R 54	Data sheet R 54
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

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SILIKAL® TA 1

Thixotropic agent for MMA, EP and PU coatings

Area of application

– SILIKAL® TA 1 is based on polyethylene fibres and can be used to thicken Silikal MMA, EP and PU coatings so that they can be used on inclined or vertical surfaces. Depending on the desired thixotropic properties, up to 5 percent by weight of thixotropic agent with reference to the resin is added. The powder is white and causes opaque cloudiness in clear resins.

Advice on application

– SILIKAL® TA 1 is slowly mixed and stirred into the Silikal coating product. If the product is based on resin and fillers, the thixotropic agent is first mixed into the resin for two minutes, and after this the fillers are worked in. For MMA products, the hardening powder is then worked in on the basis of the technical data sheet specifications. The mixture reaches the desired thixotropic state immediately.

Other applicable documents

Corresponding Silikal resin	Data sheet
SILIKAL® BPO	Data sheet BPO
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

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SILIKAL® TA 2

Thixotropic agent for EP and MMA coatings

Area of application

– SILIKAL® TA 2 is based on fumed silicas and can be used to thicken Silikal EP or MMA coatings so that they can be used on inclined or vertical surfaces. Depending on the desired thixotropic properties, up to 2 percent by weight of thixotropic agent with reference to the resin is added.

– Using larger amounts can result in sticky or yellowed surfaces, particularly in the case of MMA coatings. The powder is white and causes no cloudiness in clear resins, provided that the mixture is thoroughly homogenised.

Advice on application

– SILIKAL® TA 2 is slowly mixed and stirred into the Silikal coating product. If the product is based on resin and fillers, the thixotropic agent is first mixed into the resin for two minutes, and after this the fillers are worked in. For MMA products, the hardening powder is then worked in on the basis of the technical data sheet specifications. The mixture reaches the desired thixotropic state immediately.

– SILIKAL® TA 2 thixotropic agent is a very light powder which must be handled with care to prevent airborne dust.

Other applicable documents

Corresponding Silikal resin	Data sheet
SILIKAL® BPO	Data sheet BPO
General notes	Technical documentation MMA
Safety data sheets	All used Silikal products

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General processing notes

Foreword

Please observe the following notes on applying the Silikal MMA (methyl methacrylate) coating safely and as intended.

The coating should be planned with care. The construction site must therefore be assessed thoroughly. Check the features on site and the structural conditions and also determine the impact of weather and the environment. In addition, the intended chemical, thermal and mechanical stress on the flooring system needs to be respected. Furthermore the occupational health and safety regulations, employers' liability insurance association regulations and other requirements which specify a particular floor topping design (e.g. anti-slip, electric conductivity, food hygiene regulations) may need to be met.

The "general processing notes" are the product of our many years of experience and are adapted to the processing requirements of our Silikal products.

Interior ventilation

While processing the products, ensure that there is sufficient ventilation to enable the occupational health and safety limits to be observed. Good ventilation also helps the floor coating to cure effectively. Detailed safety notes are given in the section **"Information on safety and protection".**

Despite ventilation, an odour will be detectable around the area of the coating work. We recommend informing other craftsmen, residents and neighbours in good time. An information sheet template is available from us.

Work in food and feed companies

To eliminate the risk of contamination by the coating substances (whether this involves methyl methacrylate resin, epoxy resin, polyurethane resin or other coating substances), all food and feed products and their packaging should be relocated before the coating work.

Temperature influences

The pot life and curing time of MMA resins are largely determined by the temperature of the substrate to be coated. It is also important to take into account the temperature of the resins and the fillers at the time of processing depending on their previous storage conditions (for example: warm, if they were in the sun or cold, if they were stored in frosty conditions). Please observe the temperature specifications given in the product data sheets, particularly when dosing curing agent and during the coating process.

MMA coatings behave similarly to thermoplastics, i.e. they become softer when warm and harder when cold. Reactive resin coatings can be exposed to stress as follows (taking into account the temperature-dependent pressure resistance):

	Permanent temperature	**Short-term, e.g. for cleaning purposes, full heat penetration must be avoided!**
Systems B and C	0 °C to +60 °C	Up to +80 °C
System D	-25 °C to +45 °C	Up to +60 °C

All parameters must be observed on a case-by-case basis. For example, the increasing softness at higher application temperatures can result in greater dirt absorption, skid marks, sprinkling sand being impressed (reducing non-slip properties), sinking of sharp-edged shelf units or pallet bases etc.. On the positive side, an increase in crack bridging, impact resistance and substrate adhesion is observed at elevated application temperatures.

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General processing notes

Coating thickness

The minimum and maximum thicknesses of each Silikal system must be observed (see system data sheets). If coatings are too thin, this can disrupt the curing process. Coatings which are too thick, on the other hand, can become too hot while curing because of the exothermic reaction, resulting in bulge, breaking off or the coating remaining sticky or soft.

Hard or flexible

For outdoor applications and for highly resilient floors which are exposed to shock, impact and substantial movements, elastic systems are normally used. Hard systems, on the other hand, are preferred for floors subject to high static loads, scratch resistance and chemical resistance. Soft and hard coatings can be combined. In general, the softer coatings are laid on the primer, followed by medium-elasticity coatings as a wearing surface and the hard coatings on top as top coat. An extremely hard coating must never be laid on top of an extremely soft coating, as this could cause hairline cracks in the surface, in particular if thermal stresses (hot water or outdoor applications) and mechanical pressure point loads occur. Soft systems or systems with medium-elasticity are more likely to become soiled and have skid mark problems. Extremely hard types, however, are prone to flaking if the coatings are too thick.

Scratch slurry

To level out minor irregularities, structured surfaces or deep cavities, a scratch slurry is recommended. The smoothing compound is produced on the basis of a coating resin, in conjunction with a Silikal filler and possibly a little anti-flow additive (see data sheet of the main coat resins or membrane resins) and scratched onto the primed and slightly sanded (e.g. SILIKAL® Filler QS 0.7 mm – 1.2 mm) surface. The trowel must be applied back and forth repeatedly in both directions to ensure that deeper cavities are fully closed.

Primers

Substrates must in general be primed in a film-forming and pore-filling manner in a single work step. If the primer resin is fully absorbed by the substrate, a second primer layer must be applied before the primer cures, using a “wet on wet” technique. Puddling must always be avoided. The primer can be pre-spread with a rubber slider and rolled evenly with a paint roller. To assist with work for the following coatings, the primer can be scattered in an open (slightly) manner before it cures with SILIKAL® Filler QS 0.7 – 1.2 mm.

Top coats

Silikal main coats must always be sealed in one or two work steps such that they form a film. Paint rollers with medium hair length are suitable for this (it is essential that they are lint-free). The rubber slider can be used to pre-spread initially, and then the paint roller can be used to roll the layer on in crosswise movements. The roller should cover large distances at a time, ideally perpendicular to the direction of work to avoid contact point marks. If the paint roller is used for too long or too late, curing may be disrupted or visual defects may occur. It must be ensured that the coating thickness is even – puddling must always be avoided. Hard top coats must never be rolled directly onto highly elastic main coats. In such cases, a slightly elasticised intermediate layer must be rolled on, as thermal movements could otherwise cause hairline cracks in the top coat, for example.

Important note regarding top coats

If different production batches of a Silikal top coat are used, minor differences in colour or shine may occur within a surface. We therefore recommend sealing the entire surface with material from the same production batch; this applies both to the resins and to the pigment and hardening powder used. If it is not possible to work with material from only one batch for any reason, the material from different batches should be mixed together, bearing in mind the applicable amount ratios. Exact observance of the mixing ratio and the stirring time when pigmenting the binder and the subsequent addition of the hardening powder will ensure that colour variations within a surface are kept to a minimum.

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General processing notes

Coatings (0.3 – 2 mm)

Self-levelling coatings are applied with a smoothing trowel, blade trowel or coating knife. This is followed by reworking with a top coat.

Toppings (2.0 – 6.0 mm)

Toppings are generally slightly thicker coatings. The information stated previously regarding coatings also applies to toppings. Smoothable coatings require particular manual skill if trowel marks are to be avoided. The desired coating thickness needs to be roughly pre-smoothed with a blade and manually compacted and smoothed with a smoothing trowel.

Screed, mortar, stopper mass

Because of their liquid consistency, Silikal mortars are self-compacting and almost self-levelling. A scraper and a smoothing trowel are all that is needed for laying. Depths of over 10 mm are filled with SILIKAL® R 17. Irregularities of 2 to 10 mm, on the other hand, can be levelled out on the basis of suitable Silikal main coat resins with the addition of Silikal fillers. Please consult Silikal for the mixing ratios – we can then investigate your specific needs precisely.

Decorations

To design the colour of a Silikal floor, various products are available such as pigments (SILIKAL® Pigment), coloured flakes (SILIKAL® Flakes), coloured sands (SILIKAL® Filler FS/FM) and decorative layers. Please refer to the individual system data sheets and Silikal brochures for more information.

Non-slip surfaces

Outdoor areas or wet rooms often require non-slip properties. In accordance with the guidelines of the “Berufsgenossenschaftliche Institut für Arbeitssicherheit” [German Employers’ Insurance Association Institute for Occupational Safety], the non-slip properties are categorised under various non-slip classes, prefixed with the letter “R”. The specifications of our test certificates must be taken into account in this regard.

The displacement space “V” refers to the volume (cavity) remaining between the sole of the shoe and the flooring system.

Special note regarding scattered toppings

Silikal generally recommends using filler particle size 0.7 – 1.2 mm for scattering. If finer sizes are used, there is a risk of disrupted curing under unfavourable conditions. However, if finer sand, such as SILIKAL® Filler QS 0.2 – 0.6 mm or 0.3 – 0.8 mm, is used nevertheless, we recommend increasing the amount of SILIKAL® BPO by roughly 0.5 – 1 % above the amount in the corresponding tables of the resin that the sand is to be scattered in. It is also important to ensure even scattering, as pile formation may cause the resin to be sucked upwards, resulting in an uneven surface. We strongly recommend contacting Silikal for a consultation before using fine scattering fillers.

Mixing

Because of their low viscosity, all Silikal systems can be stirred together with a powerful cordless electric mixer (ATEX* guidelines must be observed) in a sufficiently large mixing container in compliance with occupational health and safety and other regulations. Storage, particularly at low temperatures, can cause partial quantities of dissolved paraffins to separate out at the resin surface. It is therefore absolutely essential to stir all Silikal resins before use.

* ATEX = explosion-protection directives of the European Union (abbreviation of the French ATmosphères EXplosibles).

Tool cleaning

Simple cleaning in a non-cured state should be performed in accordance with occupational health and safety and other regulations, ideally with organic solvents based on an ester or ketone (e.g. acetone or SILIKAL® MMA Cleaner). Before further use, solvent residue must be wiped away. Solvents must not be used to dilute mixtures.

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The substrate

General notes

To effectively apply coatings and toppings, it is vital to achieve a good connection with the substrate. It is therefore essential to check the substrate for suitability and to prepare it for the subsequent coating. The substrate must be suitable for the particular coating, it must be sufficiently firm, free from dust and loose parts and free from any contamination such as oil. Furthermore, the substrate must not have undergone any treatment or received any additions or additives which would negatively affect the bonding or the curing process of the reactive resin to be applied. According to German construction contract procedures, the contractor's services include testing the substrate for its suitability for application of the prescribed topping. The contractor must inform the client of any reservations regarding the planned type of design in written form without delay if it does not correspond to the characteristics of the substrate.

Testing the substrate

Moisture

Cement screeds and concrete surfaces are only ready for coating after installation when they have reached an equilibrium moisture level of roughly 4 %. This is generally not the case until 28 days after installation. Restrictions in terms of potentially achievable equilibrium moisture levels may be necessary under certain climate conditions. The substrate must also be adequately sealed against groundwater and rising damp (capillary moisture), for example by means of a gravel filter layer or horizontal barrier (film). Waterproof concrete and waterproof screed do not provide protection against moisture penetration, as they are vapour-permeable. Moisture measurements can be performed with kiln-drying samples, CM devices and suitable electronic measurement equipment. The CM device provides the most reliable values, however. Rising damp can be checked by affixing a leak-proof polyethylene film over an area of roughly 1 m^2. If the covered area becomes dark in colour within 24 hours as the result of condensation, rising damp can be assumed. Measuring the moisture of the substrate before coating work is commenced is absolutely necessary and essential.

Firmness

The substrate must be sufficiently firm as coatings and toppings cannot perform any load-distribution function despite their high intrinsic strength because of their low coating thickness. The pressure resistance of concrete and compound screeds can be determined appropriately with a bounce hammer. The pressure resistance should be at least 25 N/mm^2 for industrial floors.

Adhesion test

A sufficient number of adhesion tests must be performed at various points on the cleaned surface of the substrate before coating/topping work is commenced. Tensile bond testing devices with test plates have proven useful in this context. As adhesive for the tensile bond punches, we recommend SILIKAL® RI/21. As pre-test, a rapid test can be performed. This test is carried out with the Silikal primer resin which will be used later on (SILIKAL® BPO added in accordance with applicable curing agent table). Half of the primer resin is used as a film-forming primer. The rest of the resin is used to create an even more viscous mortar with sand (0.7 – 1.2 mm) and applied to roughly half of the primed surface with a thickness of roughly 3 mm. Once it has hardened with no remaining tackiness, the manual sample is chiselled off with a hammer and chisel. The top of the substrate must adhere to the primer resin layer across its entire surface and must have a grain fracture in the upper zone of the substrate. The primed surface must be cured with no remaining tackiness and must not detach when scratched with a knife or screwdriver. We expressly point out that this rapid test does not substitute the tensile bond test with appropriate equipment.

Pretreating the substrate

Evenness

Reactive resin coatings cannot level out irregularities in the substrate. Irregularities can be levelled out with slurry (see **"General processing notes"**, section **"Scratch slurry"**). For very deep and large irregularities, a mortar levelling layer may be needed.

Contamination

Reactive resins have little or no adherence to soiled substrates. For this reason, any type of contamination, i.e., dry or wet, must be removed so that all pores are fully open. Oily and greasy substrates can be cleaned with special cleaning agents, with the use of scrubbing machines, high-pressure jets and flameblasting. For substrates contaminated with chemicals and for substrates which have been treated with evaporation-inhibiting sprays, we recommend flameblasting as a cleaning method. Substrates soiled with paint, bitumen or tar can be cleaned by milling or sandblasting. We strongly recommend having this cleaning performed by specialist companies.

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The substrate

Soft and detachable components

Cement slurries, cement bowls, mortar residue and all surface components which are not firmly and inseparably attached to the substrate must be chiselled, milled, sandblasted or ground off before the first application of reactive resin.

Absorbency

To allow reactive resins to firmly anchor to the surface of concrete or mortar, their primer needs to penetrate into the capillary/pore structure of the substrate, so the substrate needs to be sufficiently absorbent. Particularly high substrate absorbency is a sign of low firmness. It is then vital to prime the substrate until saturation such that it forms a film. For non-absorbent substrates, it is essential to use a primer with an adhesive effect.

Cracks

In the case of cement-bound substrates, spider-web-like surface cracking has no negative effects on the reactive resin; it is likely, however, that more primer resin will be needed. Cracks which are constantly progressing cannot be sealed in a force-locking manner, as new cracks are likely to occur. If the cracks are sealed flexibly, it must be checked that a coating/topping can be applied, and how the coating/topping would need to be structured.

Cracks which are no longer changing can be sealed in a force-locking manner with a suitable Silikal resin.

Joints

Joints need to be incorporated, even those with little tendency to move. They should form a straight line, have a uniform width and firm joint edges. Damage to the joint edges should be improved with Silikal reactive resin mortar. Rigid joints can be filled and covered with a coating after priming in most cases. Structural expansion joints always need to be incorporated and must not be filled or covered with a coating.

Cavities

Surfaces laid on a hollow framework, particularly those with cracks, must be removed and be filled with Silikal mortar after priming with Silikal primer resin.

Special note regarding common building substrates

Concrete

Cement concrete generally has a fine mortar layer on its surface (cement slurries), which needs to be removed before any coating is applied because of its low firmness and low adhesion to the substrate. Suitable methods for this are, depending on the nature of the substrate: milling, sandblasting, shotblasting and flameblasting.

Cement screeds

Cement screeds, particularly hard aggregate screeds, can have surfaces which are so dense that reactive resin primer can hardly penetrate at all. The pores of these surfaces must be opened, for example by sandblasting. In the case of cement screeds, the cement slurries must be removed by milling or sandblasting. Hard aggregate screeds can be roughened by shotblasting

Anhydrite and magnesite screeds

Anhydrite and magnesite screeds are not moisture resistant. In the case of reaction coatings/toppings which are impermeable to water vapour, the risk of moisture penetration from the rear and adjacent structural elements must be reliably eliminated. There is a major risk not only of the coating detaching in the case of inadequate sealing but also of these screeds themselves being destroyed. For these reasons, we advise against coating with Silikal MMA systems.

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The substrate

Mastic asphalt screeds

Mastic asphalt screeds should only be coated in indoor areas as they react substantially to temperature fluctuations. Coatings should only be applied with flexible reactive resins, as mastic asphalt can deform or lose its firmness under load and under fluctuating temperatures. A test of the hardness class according to DIN EN 13813 is essential (only hardness classes IC 10 and IC 15 can be coated). The surface of mastic asphalt screeds, particularly if they have been relaid, must be free from bitumen films (we expressly draw your attention to the section **“Testing the substrate”**, subsection **“Adhesion test”**).

Ceramic toppings

Ceramic toppings must be firmly bonded with the substrate. To achieve sufficient adhesion on ceramic toppings with reactive resins, their surface may need to be pre-treated by means of mechanical roughening (e.g. sandblasting) (perform adhesion test!). Ceramic substrates must be primed with an adhesive Silikal primer. If the adhesion tests reveal that adhesion is inadequate, the adhesion may be improved by adding SILIKAL® Additive M.

Metals

According to the Swedish standard SIS 05 5900, SA 2.5 (Near White Blast Cleaning), prepared metal substrates are non-absorbent and need to be treated with a special adhesive primer. SILIKAL® R 59 is used for this. Metal substrates should only be coated with flexible reactive resins. We recommend consulting with Silikal.

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Fillers and pigments

Standard fillers at a glance:

SILIKAL® Filler SL	Quartz-flour-free Silikal filler for scattered toppings
SILIKAL® Filler SV	Mixture of quartz flour and finer quartz sand for self-levelling toppings
SILIKAL® Filler QM	Quartz flour as fine filler for thin self-levelling and rolled coatings
SILIKAL® Filler QS	Quartz sand in various particle sizes for scattering, sprinkling, as mortar additive or as filler additive for certain coatings
SILIKAL® Filler FS	Coloured quartz (individual colours) with uniform grain-size distribution curve for scattered toppings
SILIKAL® Filler FM	Coloured quartz mixtures for scattered toppings and for trowelable toppings
SILIKAL® Filler CL	Filler mixture as system component for the Silikal design coating SILIKAL® Concrete Look

Special fillers at a glance:

SILIKAL® Filler Si	Mixture of quartz flour and quartz sand of various particle sizes for scattered toppings of 4 mm thickness and above
SILIKAL® Filler 65	Silikal mortar sand for high-fill SILIKAL® RH 65
SILIKAL® Filler SG	Sharp-edged, opaque chippings for retroactive creation of anti-slip properties
SILIKAL® Filler GR	Sharp-edged granite chippings, grey or brown, in particle size 0.5 – 1 mm and 1 – 2 mm as additive mixture for coloured quartz to achieve high anti-slip classes

With this filler portfolio, Silikal covers all major applications for industrial floor toppings. All fillers supplied by Silikal are perfectly matched to suit the Silikal resins, dust-reduced where possible and extensively tested. All these fillers have proven their worth in practice. If any fillers other than those named above are used in Silikal coatings/toppings, their suitability must be checked by Silikal in advance. Silikal fundamentally excludes any liability in the case of fillers being used which have not been tested and approved by Silikal.

Coloured flakes

Coloured flakes are used for decorative design of self-levelling coatings and can be scattered across the whole surfaces or loosely. We recommend using exclusively SILIKAL® Flakes (see brochure **“Colour concepts”**, available separately). If any coloured flakes other than Silikal colour chips are used, their suitability must be checked by Silikal in advance. Silikal fundamentally excludes any liability in the case of coloured flakes being used which have not been tested and approved by Silikal.

Coloured quartz

Coloured quartz are used for decorative design of self-levelling coatings and can be scattered across the whole surfaces or used for smoothable mortars. We recommend using exclusively SILIKAL® Filler FS or SILIKAL® Filler FM (see brochure **“Colour concepts”**, available separately). If any coloured quartz other than Silikal coloured sands are used, their suitability must be checked by Silikal in advance. If coloured sands are used which have not been tested and approved by Silikal, Silikal fundamentally excludes any liability.

Pigments

SILIKAL® Pigment is stirred into the resin together with the fillers. It must be ensured that the pigment is dispersed without any lumps. The amount to be added is dependent on the type of pigment and the desired coating thickness. Silikal pigment powders are tested and can be supplied in many standard RAL colours (see brochure **“Colour concepts”**, available separately). If any pigments other than Silikal pigments are used, their suitability must be checked by Silikal in advance. If pigments are used which have not been tested and approved by Silikal, Silikal fundamentally excludes any liability.

Anti-flow additives

SILIKAL® TA 1 or TA 2 can be used to raise the viscosity of Silikal resins. Please observe the corresponding product data sheets. If any anti-flow additives other than Silikal anti-flow additives are used, their suitability must be checked by Silikal in advance. If anti-flow additives are used which have not been tested and approved by Silikal, Silikal fundamentally excludes any liability.

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Chemical resistance

The data given in the following table applies at room temperature (approx. +20 °C) and serves as a guide. Because of the large number of formulations which are used in practice – e.g. in cleaning and disinfection applications – and potential interactions of various chemicals used on site, it is not possible to assume any general or individual guarantee. The chemical resistance of a coating is also influenced by the fillers and pigments used. For these reasons, you will need to perform your own tests on a case-by-case basis.

Chemicals may in some circumstances lead to discolourations, without attacking the material, however.

It must be noted that the aggressiveness of acids and other chemicals can increase at higher temperatures. In addition, it is possible for acids to alter their concentration on the floor by means of evaporation or by absorbing moisture, which could cause them to react more aggressively.

The stresses which occur in practice often involve greater and more prolonged temperature stresses and may therefore lead to different results in some circumstances. If you have any questions in this regard, please contact Silikal's Application Technology department.

Test medium	SILIKAL® R 62, R 82 RF 6200 pigmented/Base RF 8200 pigmented/Base	SILIKAL® R 71, R 72, R 73, RF 7000 pigmented/Base	SILIKAL® RE 77
Alkalis:			
Ammonium hydroxide 10 %	+	+	+
Ammonium hydroxide 25 %	+	+	+
Ammonium hydroxide, alcoholic	o	o	o
Potassium hydroxide 10 %	+	+	+
Potassium hydroxide 50 %	+	+	+
Calcium hydroxide	+	+	+
Sodium hydroxide 10 %	+	+	+
Sodium hydroxide 50 %	+	+	+
Acids:			
Formic acid 10 %	o	o	-
Formic acid 30 %	-	o	-
Formic acid 42.5 %	-	-	-
Boric acid 3 %	+	+	+
Chromic acid 20 %	+	+	-
Chromic acid 40 %	o	+	-
Acetic acid 10 %	+	+	-
Acetic acid 25 %	o	o	-
Acetic acid 30 %	o	o	-
Acetic acid 80 %	-	-	-
Fatty acid (tall oil fatty acid)	o	o	-
Lactic acid 30 %	+	+	o
Oxalic acid 10 %	+	+	o
Phosphoric acid 40 %	+	+	+
Phosphoric acid conc. (85 %)	o	o	o
Nitric acid 10 %	o	o	o
Nitric acid 30 %	o	-	o
Nitric acid, conc. (65 %)	-	-	-
Hydrochloric acid 10 %	+	+	+
Hydrochloric acid, conc. (36 %)	+	+	+
Sulphuric acid 30 %	+	+	+
Sulphuric acid 50 %	+	+	o
Sulphuric acid 80 %	-	-	o
Citric acid 30 %	+	+	+
Citric acid 50 %	+	+	o

Test medium	SILIKAL® R 62, R 82 RF 6200 pigmented/Base RF 8200 pigmented/Base	SILIKAL® R 71, R 72, R 73, RF 7000 pigmented/Base	SILIKAL® RE 77
Solvents:			
Petrol, 2 star	-	+	+
Petrol, 4 star	-	-	+
Benzene	-	-	+
Biodiesel	-	-	-
Butanol	-	-	+
Butyl ether	-	-	o
Chloroform	-	-	-
Cyclohexane	+	+	+
Dibutyl phthalate	o	o	+
Dicyclophthalate	o	o	+
Diesel oil/heating oil	+	+	+
Ethyl acetate	-	-	o
Ethyl alcohol 10 %	o	+	+
Ethyl alcohol 96 %	-	-	o
Glycerine	+	+	+
Heptane	+	+	+
Hexane	+	+	+
Isopropyl alcohol	-	o	+
Kerosine	+	+	+
White spirit	o	+	+
Methanol	-	-	o
Methylene chloride	-	-	-
Monochlorobenzene	o	o	+
n-Propyl acetate	-	-	o
Perchloroethylene	o	o	-
Petroleum	o	+	+
Phenol	o	o	o
Styrene	o	o	o
Turpentine	+	+	+
Toluene	-	-	o
Trichlorethylene	-	-	-
Xylene	-	-	o

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Chemical resistance

Test medium	SILIKAL® R 62, R 82 RF 6200 pigmented/Base RF 8200 pigmented/Base	SILIKAL® R 71, R 72, R 73, RF 7000 pigmented/Base	SILIKAL® RE 77
Water and aqueous solutions:			
Waste water (sewage)	+	+	+
Chlorine water	+	+	+
Formaldehyde 37 %	+	+	o
Anti-freeze (glycol-based)	o	+	+
Tap water	+	+	+
Sea water	+	+	+
Sodium chloride 5 %	+	+	+
Sodium chloride saturated	+	+	+
Sodium hypochlorite 15 %	+	+	+
Sodium carbonate (soda)	+	+	+
Soap solution	+	+	+
Water, deionised	+	+	+
Water +80 °C	o	o	o
Hydrogen peroxide 30 %	o	o	o
Hydrogen peroxide 80 %	o	o	-
Beverages:			
Beer	+	+	+
Brandy 40 vol. %	o	+	+
Vegetable juice	+	+	+
Lemonade	+	+	+
Milk	+	+	+
Tomato juice / grape juice	+	+	+
Red wine	+	+	+

Test medium	SILIKAL® R 62, R 82 RF 6200 pigmented/Base RF 8200 pigmented/Base	SILIKAL® R 71, R 72, R 73, RF 7000 pigmented/Base	SILIKAL® RE 77
Oils and greases:			
Blood	+	+	+
Drilling oils	o	o	+
Hydraulic oil (e.g. Skydrol B 500)	o	o	o
Linseed oil	+	+	+
Mineral oil	+	+	+
Olive oil	+	+	+
Vegetable fats	+	+	+
Castor oil	+	+	+
Crude oil	+	+	+
Animal fats	+	+	+

Assessment		
+	**Resistant**	Based on the preliminary test, prolonged exposure of the coating material to this medium appears possible. Chemicals may lead to discolourations or to changes in the amount of gloss, but without attacking the material.
o	**Partly resistant**	Prolonged exposure is not possible, as severe softening or swelling could occur in the case of longer exposure times. Short-term exposure (approx. 1 – 2 hours) is possible.
-	**Not resistant**	Even brief exposure could cause damage to occur.

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Information on safety and protection

General notes

Silikal reactive resins are safe, unproblematic and do not pose any risk to health when properly handled. Nevertheless, like other chemicals, they must be handled according to strict rules. The manufacturer is obliged to print hazard information on the labels and to make safety data sheets available. The user must display operating instructions when setting up the construction site or instruct personnel at prescribed intervals. (Sample operating instructions are provided on the BG Bau website. All Silikal resins have the GISCODE RMA 10. This code must be cited on every label and technical data sheet and in the safety data sheet.) The application site and its surroundings must be kept clean and tidy. Food, tobacco products and personal clothing items must not be stored at the workplace. It is obligatory to wear protective work clothing, safety goggles, safety gloves and other personal protective equipment. Work clothing contaminated with resin must be changed immediately. Applicators must thoroughly clean their hands after finishing work and particularly before eating. First aid equipment such as first aid kit, eye rinsing kit etc. must be kept within easy reach at the workplace. It must be ensured that there is adequate ventilation (cross-ventilation) with fresh air during the application. Hazard information and safety advice given on containers must be observed.

Flammable liquids

Silikal MMA resins are flammable liquids. Observing regulations on handling, storing and processing flammable liquids is mandatory. Accordingly, operating instructions describing how to handle flammable liquids must be drawn up and displayed at the construction site. Appropriate fire protection equipment (e.g. fire extinguishers) must be provided. These examples are not exhaustive: for all precautions which need to be taken, refer to the corresponding regulations.

Emissions

When Silikal reactive resins are applied, a certain amount of methyl methacrylate evaporates. Sufficient ventilation must be provided. This evaporation may be perceived as an unpleasant odour. The threshold limit value (TLV) is the highest permitted concentration of the particular substances, such as MMA, at the workplace which generally has no negative effect on the health of the employees even in the case of repeated and prolonged exposure (generally 8 hours of exposure) according to the current state of knowledge. We recommend checking the TLV at the construction site. Measurements can be performed with portable electronic equipment or detector tubes. Respiratory protection is generally recommended during mixing, transport and application (filter class A 1 or A 2), and filter devices with an active fan (“Airstream helmets” or “CleanSpace” respiratory masks) should be used where possible. These are not subject to the wearing time limits under No. 6.3 of ZH1/701 “Rules for the use of respiratory equipment” or to occupational health check-ups under employers’ liability insurance association principle G26, or to the keeping of a protocol log according to VBG 100. As section 19 of the German Hazardous Substances Ordinance (GefStoffV) states that wearing respiratory equipment must not be a permanent measure, the corresponding exceptional approval needs to be obtained from the Trade Supervisory Office responsible.

Safety data for methyl methacrylate (MMA)

Flashpoint:	+10 °C
Lower explosion limit:	2.1 vol. %
Upper explosion limit:	12.5 vol. %
Ignition temperature:	+430 °C
Ignition group:	G 2 or T 2
TLV:	50 ppm or 210 mg/m³ or 0.005 vol. %

Contact with eyes

When handling Silikal products, appropriate eye protection (e.g. safety goggles) must be worn. If splashes of resin nevertheless get into the eyes, rinse thoroughly with plenty of clear tap water. An eye specialist should be consulted.

Contact with the skin

When handling Silikal products, suitable safety gloves should be worn. Appropriate protective cream should be rubbed into any exposed skin. Splashes which make contact with the skin should be swabbed with absorbent paper. Then wash the skin with a plenty of water and mild soap, dry and apply skin cream.

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Information on safety and protection

First aid

See Silikal safety data sheets.

Instruction sheets of the German Chemical Trade Association

M 001: “Organic peroxides”

M 004: “Irritants / corrosive substances”

M 017: “Handling solvents”

M 042: “Preventing industrial skin diseases”

T 005: “Handling empty containers”

These can be obtained from: Jedermann-Verlag, Postfach 10 31, 69021 Heidelberg

Information from the German Construction Trade Association:
GISCODE RMA 10 “Coatings, containing methyl methacrylate, irritant”: Operating instructions, safety data sheets, exposure description

The following must also be observed

VBG 23 “Applying coating substances” (this must always be available at the place of work).

Status report of the Deutsche Bauchemie: “Methacrylate resins in the building industry and the environment”

If fillers containing quartz flour are used, the safety guidelines and precautionary measures for avoiding dust named in the safety data sheets must be observed.

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Storage and transport

Storage

Silikal resins are low-viscosity acrylic resins with monomer esters of acrylic and methacrylic acid, in particular methyl methacrylate (MMA). The storage and transport regulations are determined by the percentage of monomer MMA. For other products which do not contain any methacrylic acid esters, such as epoxies or polyurethanes, other regulations may apply – these regulations can be found in the safety data sheets or are available on request in particular cases. Silikal resins with monomer MMA are flammable. For safe handling of Silikal resins, please refer to our safety guidelines **" Information on safety and protection "**. As they are flammable, Silikal methacrylic resins should be kept away from open sources of ignition. They must be stored in a cool place, protected from direct sunlight, at temperatures below +25 °C in closed containers. It must always be ensured that the storage rooms are adequately ventilated. If these guidelines are observed, the storage durability of Silikal resins in their original unopened containers is at least 6 months for ready-to-use products and 9 months for clear resins. Storage at low temperatures for prolonged periods can cause partial quantities of dissolved paraffins to separate out at the resin surface. In such cases, the container contents must be stirred before use. Certain volume limits apply for storage. Storage spaces above a certain size need to be reported and require approval.

Storage of SILIKAL® BPO

The hardening powder SILIKAL® BPO is a Class 5.2 organic peroxide (UN number 3106) and may undergo exothermic decomposition at higher temperatures. This can cause harmful and flammable gases to develop. SILIKAL® BPO must therefore not be left in vehicles parked in the sun and it must not be stored in direct sunlight. SILIKAL® BPO must always be stored in the closed secondary cardboard packaging both during transport and in storage.

Transport

Silikal resins such as SILIKAL® BPO are subject to the transport regulations of

GGVSE / ADR (road)

GGVBinsch / ADNR (inland waterways)

GGVSee / IMDG (high seas)

ICAO-Ti / IATA-DGR (air).

They must be packed, labelled, loaded, transported and unloaded in accordance with these regulations.

A) Packaging

(1) The packaging must be manufactured and sealed in such a way that the contents cannot escape once packaged ready for shipment under normal transport conditions, particularly as a result of a change in temperature, humidity or pressure. No hazardous substances may adhere to the outside of the packages. These regulations apply to new packaging and to packaging that is re-used.

(2) The parts of the packaging which make direct contact with hazardous substances must not be impaired by chemical or other actions of these substances; they may need to be given a suitable inner lining or treatment. These parts of the packaging must not contain any components which could react dangerously with the contents, form hazardous substances or considerably weaken them.

(3) All packaging, with the exception of the inner packaging of assembled packaging, must conform to a design type which is tested and approved according to the regulations in section IV. Mass-produced packaging must conform to the approved design type.

(4) If packaging is filled with liquids, some unfilled space must remain to make it possible to ensure that the expansion of the liquid as a result of the temperatures which may be reached during transportation would neither cause the liquid to escape nor result in any lasting deformation of the packaging.

B) Identification

Hazardous substance labels must be applied to the individual packages in accordance with the following regulations:

(1) Labels 1, 2, 3, 4.1, 4.2, 4.3, 5.1, 5.2, 6.1, 6.2, 7, 7 B, 7 C, 8 and 9 incl. UN no. must take the form of a square set at an angle of 45° with a side length of 10 cm. They must be marked with a continuous black line running around the edge at a distance of 5 mm. Hazardous substance labels which are to be applied to fixed tanks, demountable tanks, containers and swap bodies must have side lengths of at least 25 cm.

Storage and transport

(2) Labels 10, 11 and 12 must take the form of a rectangle in standard A5 format (148 x 210 mm). Labels on packages may be reduced in size to standard A7 format (74 x 105 mm).

(3) The bottom half of the hazardous substance label must contain the number of the hazardous substance class indicating the type of hazard.

(4) Hazardous substance labels which are required by the requirements of this appendix must be adhered to packages and fixed tanks or fastened in some other appropriate way. If the state of the outside of a package does not permit this the labels should be stuck on cards or tablets securely attached to the package. Instead of labels, permanent hazardous goods symbols which conform exactly to the models described above may be affixed to the shipping packages and to the fixed tanks.

(5) Packages with Silikal reactive resins, acetone or SILIKAL® MMA Cleaner must have a label conforming to model 3:

Packages with SILIKAL® BPO must have a label conforming to model 5.2:

C) Loading

- Only undamaged packages which have been packed and labelled according to regulations are permitted for transport.
- Written instructions, if required, are to be handed over to the vehicle driver.
- Smoking is absolutely prohibited during loading.
- Only vehicles conforming to regulations and carrying the corresponding equipment are permitted for loading. This must be checked by the loading supervisor.
- The cargo must be secured to the load platform to prevent it from tipping over or slipping.
- Warning signs must be applied as required. The loading supervisor shares responsibility for ensuring that all provisions set down in the individual regulations for loading and transport are observed.

Transporting hazardous goods by car

Transporting hazardous goods in cars is common practice both privately and in industry. Smaller quantities of hazardous goods are also often transported by car in the chemical industry (e.g. by sales representatives carrying samples).

The transport of hazardous goods on roads is governed by transport regulations, regardless of whether the goods are transported by lorry or car. Nevertheless, cars are less suitable for transporting hazardous goods as they are primarily designed for transporting people.

All those involved in transporting hazardous goods must take the necessary precautions required according to the nature and severity of the hazards in order to prevent damage and, if damage does occur, to reduce it to a minimum.

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Storage and transport

The following requirements must be observed before departure:

1. Do not package goods together which could react dangerously with one another.
2. The cargo must be secured in such a way that little or no change to its position is possible during transport (e.g. with a tight fit, secured with lashing straps).
3. Must be stowed separately from the driver (e.g. in the boot).
4. Even distribution of load.
5. The packaging must be closed correctly.
6. Do not transport packages which are damaged or leaking or packages which have product adhering to their outside.
7. The vehicle must be equipped with a fire extinguisher (recommended for amounts of benzoyl peroxide ≥1 kg).
8. Check insurance coverage. Consult with the insurance company to ensure that there is sufficient coverage in the event of damage with hazardous goods.
9. Do not park vehicles in bright sunlight.
10. Observe quantity restrictions.

D) Transport (road)

– All papers required for transport must be carried on board.
– The driver must be instructed regarding the hazards and have corresponding training.
– Vehicles subject to labelling must not be used to transport persons. All other provisions (e.g. stopping and parking provisions) of the individual regulations must also be observed.

E) Unloading

– Smoking is absolutely prohibited during unloading.
– The load platform must be cleaned as required.
– If the vehicle no longer contains any hazardous goods, the warning signs and accident procedures sheets must be removed.

All provisions of the regulations must also be observed. In general, training is prescribed for personnel commissioned to transport hazardous goods with regard to accidents occurring during the transport of hazardous goods.

Finally, it should be noted that this list by no means covers the entirety of transport law. For further information, please contact the Silikal Hazardous Goods Officer.

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General cleaning notes

General notes

Industrial floors, types of contamination, hygiene requirements etc. vary according to the branch of industry. The food processing industry, for example, has different floors and types of contamination than those in the metalworking industry or those used in exhibitions.

Even within a particular branch of industry, there are different purposes of use which require different cleaning methods.

Whether cleaning is performed manually or by machine is normally determined by the size of the surface area. The cleaning method used is influenced by:

- the nature of the particular branch of industry
- use within the branch of industry
- the size of the area to be cleaned
- the characteristics of the industrial floor
- the types of contamination
- the level of contamination
- the accessibility of the area to be cleaned
- the required level of hygiene

Cleaning agents

The choice of cleaning agent and cleaning method is primarily determined by the type of contamination. Essentially, all alkaline cleaning agents are suitable, regardless of whether they are sodium or potassium hydroxide-based. Surfactants and hypochlorite additives do not normally have any negative effect on Silikal methacrylic resin coatings.

Lime spots can be removed with hydrochloric acid or acetic acid (max. 10%), for example. However, subsequent rinsing with clear water is essential.

High cleaning agent concentrations, for example those based on ammonium hydroxide/ammonium chloride or on nitric acid, may cause clouding or discolouration of the floor without actually attacking it.

Methacrylic systems react sensitively to alcohols. Caution must also be exercised with all organic solvents. Aromatic and halogen hydrocarbons must not be used (see also the data sheet **“Chemical resistance”**).

Example of a cleaning concept

When it comes to the cleaning of industrial floors, a distinction must be made between routine cleaning and basic cleaning.

New floors

Before use, newly applied Silikal floors should undergo basic cleaning with an alkaline basic cleaner.

Floors already in use should undergo routine cleaning, e.g. with a cleaning machine. If floors are heavily soiled, an alkaline basic cleaner can also be used for interim cleaning.

Heavily soiled floors

Heavily soiled floors generally require intensive basic cleaning with an alkaline basic cleaner. The dosage of the basic cleaner is determined by the particular amount of contamination. Silikal industrial floors have undergone intensive testing by various cleaning agent manufacturers.

Basic cleaning

For heavily soiled floors, we recommend basic cleaning with a suitable cleaning agent (information on cleaning agents is available from Silikal). The dosage depends on the amount of contamination. The topping must then be rinsed thoroughly with clear water.

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General cleaning notes

Tyre abrasion

Tyre abrasion, caused by forklift trucks, for example, is normally unavoidable. How the forklift trucks are handled and driven, the type of tyres and the surface texture (rough or smooth) have a critical influence on the amount of tyre abrasion. In most cases, minor tyre abrasion marks can be removed using the basic cleaner. A stain remover can be used for the partial cleaning of stubborn tyre marks. As these cleaning agents contain solvents, special attention is necessary when handling them (limit the exposure time; rinse thoroughly with clear water).

In addition to cleaning agents, this type of soiling can be avoided by using special types of tyres (light-coloured tyres) which prevent black tyre marks occurring.

The advice on use given above is based on laboratory and practical analyses. Due to the wide range of potential types of contamination and conditions of use, this information is non-binding. We recommend that you consult the manufacturer of the cleaning agent on a case-by-case basis. It is absolutely essential that cleaning agents are tested for suitability.

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Test certificates

The latest test certificates can be found at **www.silikal.de** where they are regularly supplemented and updated.

We expressly point out that the Silikal products / coating systems named in the test certificates must be used or applied in accordance with guidelines.

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Comments concerning the Ordinance on Hazardous Substances

Silikal products based on methacrylic resins (MMA) and the corresponding hardening powder based on 50 % di-benzoyl peroxide powder are subject to the German Ordinance on Hazardous Substances (GefStoffV). Persons handling these products should also always observe our safety information **“Information on safety and protection”** and the **“Safety data sheets”** for the Silikal products used.

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