

PRODUCT DATA SHEET

Sikafloor®-20 PurCem®

High strength, chemical and thermal shock resistant polyurethane hybrid trowel grade flooring screed with high slip resistance

DESCRIPTION

Sikafloor®-20 PurCem® is a multi-component, water based coloured polyurethane hybrid flooring screed. It provides good slip resistance and is suitable for areas subject to temperature shock, heavy loading, abrasion and chemical exposure.

USES

The Product is used as a wearing layer and levelling screed for Sikafloor® PurCem® flooring systems.

Please note:

- The Product may only be used by experienced professionals.

FEATURES

- Good resistance to specific chemicals
- Very good mechanical resistance
- Non-tainting
- Odourless
- Thermal expansion properties similar to concrete
- Tolerant to substrates with high moisture content

SUSTAINABILITY

- Environmental Product Declaration (EPD) in accordance with EN 15804. EPD independently verified by Institut für Bauen und Umwelt e.V. (IBU)
- VOC emissions AgBB, Sikafloor®-20 PurCem®, eurofins, Approval No. 392-2014-00087
- VOC emission classification of building materials RTS M1
- Contributes towards satisfying Indoor Environmental Quality (EQ) Credit: Low-Emitting Materials under LEED® v4
- Contributes towards satisfying Materials and Resources (MR) Credit: Building product disclosure and optimization — Environmental Product Declarations under LEED® v4

CERTIFICATES AND TEST REPORTS

- CE marking and declaration of performance based on EN 13813:2002 Screed material and floor screeds — Screed material — Properties and requirements — Synthetic resin screed material
- Incidental food contact USD Regulations, Sikafloor®-20 PurCem®, USDA, Certifica
- Tainting test Sikafloor®-20 PurCem®, Campden, Report No. 125424/2
- Cleaning test Sikafloor®-20 PurCem, CSM Fraunhofer, Certificate No. 1403-695
- Water transmission test EN 1062-3, Sikafloor®-20 PurCem®, Technology Centre, Cer
- Abrasion resistance test Sikafloor®-20 PurCem®/-21 PurCem®, Face consultants, Report No. FC/12/3850
- Impact resistance test Sikafloor®-20 PurCem®, PRA, Report No. 75221-151a
- Fire testing EN 13501-1, APPLUS, No. 21/32303045-2

PRODUCT INFORMATION

| | | | |
|---|---|---|-----------------|
| Composition | Water-based polyurethane cement hybrid | | |
| Packaging | Container Part A neutral | 2.5 kg | |
| | Container Part A | 3 kg | |
| | Container Part B | 3 kg | |
| | Part C | 26.5 kg bag | |
| | Part D | 0.5 kg plastic pouch for substrate A neutral | |
| | Packaging combined | 32.5 kg ready to mix units | |
| | Refer to the current price list for available packaging variations. | | |
| Shelf life | Part A | 12 months from date of production | |
| | Part B | 12 months from date of production | |
| | Part C | 9 months from date of production | |
| | Part D | 12 months from date of production | |
| Always refer to the best before date of the individual packaging. | | | |
| Storage conditions | <p>The Product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +30 °C. Always refer to packaging.</p> <p>Refer to the current Safety Data Sheet for information on safe handling and storage.</p> | | |
| Appearance and colour | Part A neutral | Light beige liquid | |
| | Part A | Coloured liquid | |
| | Part B | Brown liquid | |
| | Part C | Natural grey powder | |
| | Part D | colourpack as per list below for part A neutral | |
| | Cured appearance | Matt finish | |
| | Cured colour | Pebble Grey, Beige, Golden Yellow, Dusty Grey, Carmine Red, Agate Grey, Marine Blue, Yellow Green | |
| <p>Note: When the Product is exposed to direct sunlight, there may be some discolouration and colour variation. This has no influence on the function and performance of the Product.</p> <p>For colour matching: Apply colour sample and confirm selected colour under real lighting conditions.</p> | | | |
| Density | Mixed Product | ~2.08 kg/l at +20 °C | (EN ISO 2811-1) |

TECHNICAL INFORMATION

| | | | |
|-----------------------------|---------------------------|----------------------|--------------|
| Shore D Hardness | Cured 7 days at 23 °C | 85 | (ASTM D2240) |
| Compressive strength | Cured 28 days at +23 °C | 50 N/mm ² | (EN 13892-2) |
| Flexural-strength | Cured 28 days at +23 °C | 10 N/mm ² | (EN 13892-2) |
| Reaction to fire | Class B _{fl} -s1 | | (EN 13501-1) |

APPLICATION INFORMATION

| | | |
|---------------------|---|------------------------|
| Mixing ratio | Part A : Part B : Part C : Part D | 2.5 : 3.0 : 26.5 : 0.5 |
| | Part A : Part B : Part C | 3.0 : 3.0 : 26.5 |
| Consumption | ~2.1 kg/m ² per mm thickness | |

| | | | |
|---|---|---|----------------|
| Layer thickness | Wear coat | 6-9 mm | |
| | Levelling screed | 12-30 mm (where defined aggregates are added) | |
| Material temperature | Minimum | +10 °C | |
| | Maximum | +25 °C | |
| Ambient air temperature | Minimum | +10 °C | |
| | Maximum | +35 °C | |
| Relative air humidity | Maximum | 80 % r.h. | |
| Dew point | Beware of condensation. The substrate and uncured applied product must be at least +3 °C above dew point to reduce the risk of condensation or blooming on the surface of the applied product. Low temperatures and high humidity conditions increase the probability of blooming. | | |
| Substrate temperature | Minimum | +10 °C | |
| | Maximum | +35 °C | |
| Substrate moisture content | The Product can be installed on dry or damp substrates with a moisture content greater than 4 % (CM Method). The substrate must have no ponding water and a minimum adhesion pull-off strength of 1.5 N/mm ² (EN 1542). The substrate must have no rising moisture (ASTM D4263, polyethylene sheet). | | |
| Pot Life | +10 °C | ~40 minutes | |
| | +20 °C | ~25 minutes | |
| | +30 °C | ~18 minutes | |
| | +35 °C | ~15 minutes | |
| Waiting time to overcoating | Before overcoating the Product allow: | | |
| | Substrate temperature | Minimum | Maximum |
| | +10 °C | 24 hours | 72 hours |
| | +20 °C | 24 hours | 48 hours |
| | +30 °C | 12 hours | 24 hours |
| | +35 °C | 12 hours | 24 hours |
| Note: If a primer other than a scratch coat of Sikafloor® PurCem® is applied, refer to the relevant PDS of the chosen product for curing times. Ensure that the primer or scratch coat is fully cured before the application of subsequent Sikafloor® PurCem® layers. | | | |
| Note: Times are approximate and will be affected by changing ambient conditions, particularly temperature and relative humidity. | | | |

BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

FURTHER INFORMATION

Refer to the following method statements:

- Sika Method Statement — Sikafloor® and Sikagard® evaluation and preparation of surfaces
- Sika Method Statement — Sikafloor® mixing and application

IMPORTANT CONSIDERATIONS

IMPORTANT

Dirt pick up in slow curing conditions

In some slow curing conditions, soiling of the surface may occur when opened to foot traffic, even though mechanical properties have been achieved.

1. Remove dirt using a dry mop or cloth.
2. Do not scrub the Product with water for the first three days.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

EQUIPMENT

MIXING EQUIPMENT

- Electric single paddle mixer (300 to 400 rpm)
- Electric double paddle mixer (>700 W, 300 to 400 rpm)
- Forced action / rotating pan / double paddle or trough type mixer (300–400 rpm)

APPLICATION EQUIPMENT

- Flat, round edge steel trowel
- Short pile roller

SUBSTRATE QUALITY

IMPORTANT

Incorrect treatment of cracks

The incorrect assessment and treatment of cracks may lead to a reduced service life and reflective cracking.

TREATMENT OF JOINTS AND CRACKS

Construction joints and existing static surface cracks in substrate require pre-treating before full layer application. Use Sikadur® or Sikafloor® resins.

The System can be applied on green or damp concrete with no standing water. Allow for at least 3 days for early concrete shrinkage to occur to prevent shrinkage cracks from appearing on the wearing surface.

Cementitious substrates must be structurally sound and of sufficient compressive strength (minimum 25 N/mm²) with a minimum tensile strength of 1.5 N/mm².

Substrates must be clean, dry and free of all contaminants such as dirt, oil, grease, coatings, laitance, surface treatments and loose friable material.

SUBSTRATE PREPARATION

To prevent curling of the applied product during curing, place retaining grooves in the substrate along all exposed edges (perimeter, joints, connections, plinths, columns, covings and drains or gullies) as shown in the application details of the Sika Method Statement — Sikafloor® and Sikagard® evaluation and preparation of surfaces. Width and depth must be twice the thickness of the floor finish.

MIXING

3 PART MIXING PROCEDURE

1. Mix Part A (resin) for ~30 seconds.
2. Add Part D (colour pack) to Part A.
3. Mix Part A + B continuously for 30 seconds until a uniformly coloured mix is achieved.
4. Pour the mixed resin Parts into the pan mixer.
5. Start the pan mixer and gradually add Part C (aggreg-

ate) to the mixed resin Parts over a period of 15 seconds.

6. After combining all parts, mix for an additional 2 minutes, until a uniform mix is achieved. Note At ambient temperatures less than +15 °C mix between 30 seconds and 1 minute longer.
 7. During the final mixing stage, scrape down the sides and bottom of the mixing container with a flat or straight edge trowel at least once to ensure complete mixing.
- #### 4 PART MIXING PROCEDURE
1. Mix Part A (resin) for ~30 seconds.
 2. Add Part D (colour pack) to Part A.
 3. Mix Part A + D continuously for 30 seconds until a uniformly coloured mix is achieved.
 4. After mixing for 30 seconds, gradually add Part B and continue mixing for 30 seconds.
 5. Pour the mixed resin Parts into the pan mixer.
 6. Start the pan mixer and gradually add Part C (aggregate) to the mixed resin Parts over a period of 15 seconds.
 7. After combining all parts, mix for an additional 2 minutes, until a uniform mix is achieved. Note At ambient temperatures less than +15 °C mix between 30 seconds and 1 minute longer.
 8. During the final mixing stage, scrape down the sides and bottom of the mixing container with a flat or straight edge trowel at least once to ensure complete mixing.

APPLICATION

IMPORTANT

Protecting the material after application

After application, protect the System from damp, condensation and direct water contact for at least 24 hours.

IMPORTANT

Protect from overhead leaks and condensation

Protect the Product during application from pipe condensation or any overhead leaks.

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IMPORTANT

Ventilation in confined spaces

Always ensure good ventilation when applying the Product in a confined space.

IMPORTANT

Application on polymer modified cement mortars

Do not apply the product on polymer modified cement mortars if the mortar expands when sealed with an impervious resin.

IMPORTANT

Waiting time for foodstuff

Allow a minimum of 48 hours after application before placing foodstuff in the same area.

RESIN SCREED

1. Pour the mixed Product onto the prepared substrate.
2. Spread and compact the Product with a trowel to the required thickness between screed rails / battens, if installed.
3. Level the screed surface with a levelling beam spanning onto the screed rails or battens.
4. Finish the surface to the required surface texture with trowels or walk-behind power float.

CLEANING OF EQUIPMENT

Clean all tools and application equipment with Sika® Thinner C immediately after use. Hardened material can only be removed mechanically.

To prevent the nozzle from blocking, regularly clean the spraying equipment during application.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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