

PRODUCT DATA SHEET

Sikafloor®-21 PurCem®

Medium to heavy duty, self-smoothing, polyurethane hybrid flooring screed

DESCRIPTION

Sikafloor®-21 PurCem® is a multi-component, water-based coloured polyurethane hybrid screed with self-smoothing properties. It has a smooth, matt, impervious, hard wearing surface and is typically installed at 3–6 mm thickness.

USES

Sikafloor®-21 PurCem® is used as a scratch coat primer, basecoat and wear coat layer in Sikafloor®PurCem® system build ups, in areas of medium to heavy loading, high chemical exposure and abrasion.

CHARACTERISTICS / ADVANTAGES

- Good chemical resistance
- High mechanical resistance
- High glass transition point
- Non tainting / odourless
- VOC free
- Can be applied to substrates with high moisture content (7 days old or mature damp concrete)

SUSTAINABILITY

- AgBB certificate
- Emission class M1
- GISCODE PU40/ZP1 (Polyurethan/cement hybrid)
- EPD

DGNB – New buildings and extensive renovations, version 2020 2.0.0 :

The product is assessed to meet requirements for indicator 20, quality level 4, according to criteria matrix for ENV1.2/Environmentally hazardous substances. Documented by technical datasheet, safety datasheet and emission certificate (AgBB/M1).

Click here for more information:

[Sikafloor®-21 PurCem®](#)

APPROVALS / CERTIFICATES

- 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
- Cleaning test Sikafloor®-21 PurCem, CSM Fraunhofer, Certificate No. 1403-695
- Cleanability test Sikafloor®-21 PurCem®, Fraunhofer, Report No. SI 1208-611
- Impact resistance test Sikafloor®-21 PurCem®, PRA, Report No. 75221-151
- Tainting test ISO 4120, Sikafloor®-21 PurCem®, Campden, Report No. 125424/1a
- Abrasion resistance test Sikafloor®-20 PurCem®/-21 PurCem®, Face consultants, Report No. FC/12/3850
- Fire testing EN 13501-1, APPLUS, No.21/32302953-2

PRODUCT INFORMATION

Composition	Water-based polyurethane cement hybrid	
Packaging	Part A (pre-tinted)	3.00 kg plastic pail
	Part A (neutral for color paste)	2.5 kg plastic pail
	Part B	3.00 kg plastic jerrycan
	Part C	15.00 kg plastic lined, double paper bags
	Part D (color paste)	0.5 kg plastic pouch for substrate A neutral
	Part A (pre-tinted)+B+C: 21.0 kg ready to mix units Part A (neutral)+B+C+D: 21.0 kg ready to mix units Please contact our customer service, for information of what packaging sizes are sold in Denmark.	
Shelf life	Part A	12 months from date of production. Protect from freezing.
	Part B	12 months from date of production. Protect from freezing.
	Part C	6 months from date of production. Must be protected from humidity.
	Part D	24 months from date of production. Protect from freezing.
Storage conditions	Original, unopened and undamaged sealed packaging, in dry conditions at temperature between +5 °C and +30 °C.	
Appearance and colour	Part A (pre-tinted)	coloured liquid
	Part A (neutral)	light beige liquid
	Part B	brown liquid
	Part C	natural grey powder
	Part D	colourpack as per list below for part A neutral
Standard colours: Agate Grey, Beige, Carmine Red, Dusty Grey, Golden Yellow, Marine Blue, Pebble Grey, Yellow Greene.		
Density	Part A (pre-tinted)+B+C mixed: ~ 1.93 kg/l ± 0.03 (at +20 °C) Part A (neutral)+B+C+D mixed: ~ 1.93 kg/l ± 0.03 (at +20 °C)	

TECHNICAL INFORMATION

Shore D Hardness	~80–85	(ASTM D 2240)
Compressive strength	~50 N/mm ² (28 days at +23 °C / 50 % r.h.)	(BS EN 13892-2)
Tensile strength in flexure	~10 N/mm ² (28 days at +23 °C / 50 % r.h.)	(BS EN 13892-2)
Tensile adhesion strength	concrete failure	(EN 1542)

SYSTEM INFORMATION

Systems	Click here to see system datasheets for:	
	Sikafloor® PurCem® HS-21	Self-smoothing, medium to heavy duty, matt finish polyurethane cement hybrid flooring system
	Sikafloor® PurCem® HB-21	Heavy duty, light textured polyurethane cement hybrid flooring system

APPLICATION INFORMATION

Mixing ratio	<ul style="list-style-type: none">▪ Part A (pre-tinted) : B : C = 1 : 1 : 5 (packaging size = 3.0 : 3.0 : 15) by weight▪ Part A (neutral) : B : C : D = 0.83 : 1 : 5 : 0.17 (packaging size = 2.5 : 3.0 : 34 : 0.5) by weight Mix full units only.															
Consumption	~ 1.93 kg/m ² /mm															
Layer thickness	Scratch coat: 1–2 mm Base- and wear coat: 3–6 mm															
Ambient air temperature	+10 °C min. / +40 °C max.															
Relative air humidity	85 % max.															
Dew point	Beware of condensation! The substrate and uncured floor must be at least 3 °C above dew point to reduce the risk of condensation or other disturbance of the surface on the floor finish.															
Substrate temperature	+10 °C min. / +40 °C															
Substrate moisture content	Can be installed on substrates with higher moisture content. No ponding water. Check rising moisture. The substrate needs to be visibly dry and have adequate pull-off strength min 1.5 N/mm ² .															
Pot Life	<table border="1"><thead><tr><th>Temperatures</th><th>Time</th></tr></thead><tbody><tr><td>+10 °C</td><td>~ 35 - 40 minutes</td></tr><tr><td>+20 °C</td><td>~ 22 - 25 minutes</td></tr><tr><td>+30 °C</td><td>~ 15 - 18 minutes</td></tr><tr><td>+35 °C</td><td>~ 12 - 15 minutes</td></tr></tbody></table>	Temperatures	Time	+10 °C	~ 35 - 40 minutes	+20 °C	~ 22 - 25 minutes	+30 °C	~ 15 - 18 minutes	+35 °C	~ 12 - 15 minutes					
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Waiting time to overcoating	Before overcoating Sikafloor®-21 PurCem® allow: <table border="1"><thead><tr><th>Substrate temperature</th><th>Minimum</th><th>Maximum</th></tr></thead><tbody><tr><td>+10 °C</td><td>24 hours</td><td>72 hours</td></tr><tr><td>+20 °C</td><td>24 hours</td><td>48 hours</td></tr><tr><td>+30 °C</td><td>12 hours</td><td>24 hours</td></tr><tr><td>+35 °C</td><td>12 hours</td><td>24 hours</td></tr></tbody></table> <p>Times are approximate and will be affected by changing ambient and substrate conditions, particularly temperature and relative humidity. If used other primers than Scratch Coat refer the Technical Data Sheet of the respective product. Make sure that the primer and the scratch coat layer is fully cured before application of Sikafloor® PurCem® previous layer.</p>	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
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BASIS OF PRODUCT DATA

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

FURTHER INFORMATION

Please refer to:

- Sikafloor® PurCem® Method Statement
- Sika® Method Statement Mixing and Application of Flooring Systems
- Sika® Method Statement Surface Evaluation & Preparation
- Sikafloor® PurCem® System Data Sheets

IMPORTANT CONSIDERATIONS

- Do not apply to PCC (polymer modified cement mortars) that may expand due to moisture when sealed with an impervious resin.
- Always ensure good ventilation when using Sikafloor®-21 PurCem® in a confined space, to prevent excessive ambient humidity.
- Freshly applied Sikafloor®-21 PurCem® must be protected from damp, condensation and direct water contact (rain) for at least 24 hours.
- Protect the substrate during application from condensation from pipes or any overhead leaks.
- Do not apply to cracked or unsound substrates.
- Always allow a minimum of 48 hours after product application prior to placing into service in proximity

with food stuffs.

- Products of the Sikafloor® PurCem® product range are subject to discolouration when exposed to UV radiation. Extent depends on colour. There are no measurable losses of any properties when this occurs and it is a purely aesthetical matter.
- Products can be used outside provided the change in appearance is acceptable for the customer.
- In some slow curing conditions, soiling of the surface may occur when opened to foot traffic, even though mechanical properties have been achieved. It is advised to remove dirt using a dry mop or cloth. Avoid scrubbing 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.

DIRECTIVE 2004/42/CE LIMITATION OF EMISSIONS OF VOC

According to the EU Directive 2004/42/CE, the maximum allowed content of VOC (product category IIA / j type wb) is 140 g/l (Limits 2010) for the ready to use product.

The maximum content of Sikafloor®-21 PurCem® is < 140 g/l VOC for the ready to use product.

APPLICATION INSTRUCTIONS

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 / gullies) as shown in the application details of the Sika Method Statement: Sikafloor®- PurCem®. Width and depth must be twice the thickness of the floor finish.

SUBSTRATE QUALITY / PRE-TREATMENT

The surface must be clean, dry and free of all contaminants such as dirt, oil, grease, coatings and surface treatments, etc. All dust, loose and friable material must be completely removed from all surfaces before application of the product, preferably by vacuum. Pull of strength shall not be less than 1.5 N/mm². If in doubt apply a test area first.

MIXING

Premix part A with a low speed electric stirrer and then add part B and mix for 30 seconds. For the colourpack version, premix part A neutral with a low speed electric stirrer and add part D to it. Mix until a uniform colour is achieved. Add part B and mix for 30 seconds.

Use a double paddle (axis) mixer and gradually add part C (aggregate) to the mixed resin. Allow part C to blend for further 2 minutes minimum, to ensure complete mixing and a uniform moist mix is obtained. During the operations, scrape down the sides and bottom of the container with a flat or straight edge trowel at least once (parts A+B+C) to ensure complete mixing.

Mixing Tools

Use a low speed electric stirrer (300 - 400 rpm) for mixing parts A and B. For preparation of the mortar mix use a double paddle mixer.

APPLICATION

Prior to application, confirm substrate moisture content, relative humidity and dew point. As a scratch coat Sikafloor®-21 PurCem® can be applied using a steel trowel. As a body coat Sikafloor®-21 PurCem® can be applied using a toothed trowel or pin screed, to the desired thickness, or a steel trowel. Remove air with a spike roller.

For further details please refer to the related system data sheet.

CLEANING OF EQUIPMENT

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

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

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Sikafloor®-21 PurCem®

August 2022, Version 05.02

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LEGAL NOTES

Any information or suggestions for use concerning Sika's products, which we either in writing or orally have given buyers or end-users of the product, have been given in good faith based on our own experiences and based on approved praxis and the technological and scientific knowledge on the time of giving such suggestions and information, which are given without any type of guarantees, and which do not lead to any further responsibility from Sika Danmark A/S, besides what is stated in the sales agreement in question. The buyer or end-user should themselves investigate or otherwise make sure, that our products are suitable for the use in question and further make sure that the products are kept and used correct and in agreement with the published rules and considering the actual conditions in order to avoid damages or less satisfactory results. Any order is accepted and any deliverance is affected according to the general terms of sales and delivery from Sika Danmark A/S, which are considered known and accepted, and which could be handed out when asked for. Our catalogues are not up-dated automatically. The present product data sheet is only for use in Denmark. Values stated in the present product data sheet should be seen as recommended, unless stated otherwise.

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