BUILDING TRUST

PRODUCT DATA SHEET

Sikafloor®-20 PurCem®

HEAVY DUTY, POLYURETHANE-HYBRID FLOORING SCREED

PRODUCT DESCRIPTION

Sikafloor®-20 PurCem® is a multi-component, water-based coloured polyurethane hybrid flooring screed. It has flat, high abrasion, chemical, impact and slip resistant surface. It is typically installed at 6 – 9 mm.

USES

Sikafloor®-20 PurCem® installation works to be carried out only by Sika Approved Contractors. Please observe information given by Product Data Sheets. Sikafloor®-20 PurCem® is used as a final flooring wear layer in Sikafloor® PurCem® HM-20 system build up in areas of high mechanical abrasion and impacts, aggressive chemical attack, thermal shocks and high temperature stresses.

CHARACTERISTICS / ADVANTAGES

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

ENVIRONMENTAL INFORMATION

LEED Rating

Confirms Section FQ (Indoor Environment Quality), Credit 4.2 Low Emitting Materials Paints and Coatings (VOC content ≤ 50 g/l). Complies to AgBB for use in indoor environment. Test report Nr. 392-2014-00087003A_03.

APPROVALS / STANDARDS

- Polyurethane screed for concrete protection according to the requirements of EN 1504-2:2004 and conforms to the requirements of EN 13813: 2002, DoP 02 08 02 02 001 0 000001 1088, certified by Factory Production Control Body, 0086, certificate 541325, and provided with the CE-mark.
- EN1186, EN 13130, and prCEN/TS 14234 standards, and the Decree on Consumer Goods, representing the conversion of directives 89/109/EEC, 90/128/EEC and 2002/72/EC for contact with food stuffs, according to test report by ISEGA, 32758 U11 and 32759 U11, both dated December 6th, 2011. (Tests performed on Sikafloor® -20/21/22/29 and 31 PurCem® in standard and LP versions).
- British Standards Specifications (BSS) acceptance for use in the UK.
- Campden and Chorleywood Food Research Association, Ref. S/REP/125424/1a and 2a, dated 8th February, 2012
- Fire classification report according to EN 13501-1 from Exova Warrington Fire for Sikafloor®-20 PurCem® No.317045, dated 24th of March, 2012
- Liquid water transmission rate test report from the Technology Centre, Ref. 15456 dated January 25th, 2012
- Abrasion resistance tests performed by Face Consultants Ltd., according to BS 8204-2:2003, report ref. FC/12/3850, dated January 17th, 2012. (Tests performed on Sikafloor® -20/21 PurCem®)
- Impact resistance values tested at PRA, Ref. nº 75221-151a, dated February 15th, 2012
- Thermal expansion coefficient and freeze-thaw cycle resistance performed at RWTH / IBAC, report nº M-1614 dated May 29th, 2012.

PRODUCT INFORMATION

Chemical Base	Water-based polyurethane cement hybrid	
Packaging	Part A (pre-tinted)	3.00 kg plastic pail
	Part A (neutral)	2.615 kg plastic pail
	Part B	3.00 kg plastic jerrycan
	Part C	26.50 kg plastic lined, double paper bags
	Part D	0.385 kg plastic pouch for substrate A neutral
	Part A (pre-tinted)+B+C: 32.5 kg ready to mix units Part A (neutral)+B+C+D: 32.5 kg ready to mix units	
Appearance / 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, Dusty Grey, Grass Green , Light Grey, Maize Yellow, Oxide Red, Pebble Grey, Sky Blue	
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	The package must be stored properly in original, unopened and undamaged sealed packaging, in dry conditions at temperatures between +5°C and +30°C.	
Density	Part A (pre-tinted)+B+C mixed: ~ 2.08 kg/l ± 0.03 (at +20°C) Part A (neutral)+B+C+D mixed: ~ 2.08 kg/l ± 0.03 (at +20°C)	

TECHNICAL INFORMATION

Shore Hardness	Shore D: 80 - 85	(ASTM D 2240)
Compressive Strength	> 50 N/mm² after 28 days at +23°C / 50% r.h.	(BS EN 13892-2)
Flexural Strength	> 10 N/mm² after 28 days at +23°C / 50% r.h.	(BS EN 13892-2)
Tensile Adhesion Strength	concrete failure	(EN 1542)

SYSTEM INFORMATION

Systems	Please refer to the System Data Sheet of:	
	Sikafloor® PurCem® HM-20	Heavy-duty, lightly textured, high chemical, mechanical and temperature resistant PUCEM hybrid screed

APPLICATION INFORMATION

Mixing Ratio	▪ Part A (pre-tinted) : B : C = 1 : 1 : 8.83 (packaging size = 3.0 : 3.0 : 26.5) by weight ▪ Part A (neutral) : B : C : D = 0.87 : 1 : 8.83 : 0.13 (packaging size = 2.615 : 3.0 : 26.5 : 0.385) by weight **Mix full units only.**

Ambient Air Temperature	+10°C min. / +40°C max.
Consumption	~ 2.1 kg/m²/mm
Layer Thickness	Wear coat 6 – 9 mm
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 blooming on the floor finish.
Substrate Temperature	+10°C min. / +40ºC
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/mm².

Pot Life

Temperatures	Time
+10°C	~ 35 - 40 minutes
+20°C	~ 22 - 25 minutes
+30°C	~ 15 – 18 minutes
+35°C	~ 12 - 15 minutes

Curing Time

Before overcoating Sikafloor® -20 PurCem® 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

Times are approximate and will be affected be 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.

APPLICATION INSTRUCTIONS

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

Homogenise part A with a low speed electric stirrer and then add part B and premix part A and B separately for 30 seconds. Make sure all pigment is uniformly distributed.
For the colourpack version, homogenise part Aneutral with a low speed electric stirrer and add part D to it. Mix until a uniform colour is achieved. Add part B and mix A neutral, D and B separately for 30 seconds. Make sure all pigment is uniformly distributed.
Start the pan mixer and gradually add part C (aggregate) to the mixed resin parts over a period of 15 seconds. Allow part C to blend for further 2 minutes minimum, to ensure complete mixing and a uniform 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 or Aneutral+B+C+D) to ensure complete mixing. **Mix full units only.**

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. Sikafloor®-20 PurCem® can be applied using a flat, round edge steel trowel. A short pile roller can be used once or twice, and always in the same direction, to provide a more homogeneous finish to the surface. For further details please refer to the related system data sheet and method statement.

CLEANING OF TOOLS

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

FURTHER DOCUMENTS

Please refer to:
- Sika® Information Manual Mixing and Application of Flooring Systems

- Sika® Information Manual Surface Evaluation & Preparation
- Sikafloor® PurCem® System Data Sheets

LIMITATIONS

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®-20 PurCem® in a confined space, to prevent excessive ambient humidity.
Freshly applied Sikafloor®-20 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. Extend 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 by 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.

VALUE BASE

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

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 the exact product data and uses.

ECOLOGY, HEALTH AND SAFETY

DIRECTIVE 2004/42/CE - LIMITATION OF EMISSIONS OF VOC

According to the EU-Directive 2004/42, the maximum allowed content of VOC Product category IIA / j type wb) is140 g/l (Limit 2010), for the ready to use product. Sikafloor®-20 PurCem, is VOC free for the ready to use product.

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.

SIKA IRELAND LIMITED
Ballymun Industrial Estate
Ballymun
Dublin 11, Ireland
Tel: +353 1 862 0709
Web: www.sika.ie
Twitter: @SikaIreland