

# PRODUCT DATA SHEET

## Sikafloor®-31 PurCem®

### WATER BASED POLYURETHANE CEMENTITIOUS HYBRID COATING

#### PRODUCT DESCRIPTION

Sikafloor®-31 PurCem® is a multi-component, water-based coloured polyurethane hybrid flooring coating. It has a matt, impervious, chemical resistant, hard wearing surface.

#### USES

Sikafloor®-31 PurCem® may only be used by experienced professionals.

- Sikafloor®-31 PurCem® is used as top and wear coat layer in Sikafloor® PurCem® anti-slip system build-ups and coating on horizontal surfaces.

#### CHARACTERISTICS / ADVANTAGES

- Good wear resistance
- High mechanical resistance
- 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:

Conformity with LEED v2009 IEQc 4.2: Low-Emitting Materials - Paints and Coatings

#### APPROVALS / STANDARDS

- Synthetic resin screed material according to EN 13813:2002, Declaration of Performance 02 08 02 02 004 0 000001 1088, certified by notified factory production control certification body 0086, certificate of conformity of the factory production control 541325, and provided with the CE marking.
- Coating for surface protection of concrete according to EN 1504-2:2004, Synthetic resin screed material according to EN 13813:2002, Declaration of Performance 02 08 02 02 004 0 000001 1088, certified by notified factory production control certification body 0086, certificate of conformity of the factory production control 541325, and provided with the CE marking.
- 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®-21 PurCem® No.31050, dated 24th of March, 2012
- Liquid water transmission rate test report from the Technology Centre, Ref. 15456 dated January 25th, 2012
- Impact resistance values tested at PRA, Ref. nº 75221-151, dated January 11th, 2012

## PRODUCT INFORMATION

<b>Packaging</b>	Part A	1.50 kg plastic drum
	Part B	1.50 kg plastic jerrycan
	Part C	2.10 kg plastic bags
	Part A+B+C	5.1 kg ready to mix units
<b>Appearance / Colour</b>	Part A (pre-tinted)	coloured liquid
	Part B	brown liquid
	Part C	natural grey powder
Available colours: Pebble Grey, Beige, Light Grey, Maize Yellow, Dusty Grey, Oxide Red, Agate Grey, Sky Blue, Grass Green		
<b>Shelf Life</b>	Part A	12 months from date of production. <b>Protect from freezing.</b>
	Part B	12 months from date of production. <b>Protect from freezing.</b>
	Part C	6 months from date of production. <b>Must be protected from humidity.</b>
<b>Storage Conditions</b>	The package must be stored properly in original, unopened and undamaged sealed packaging, in dry conditions at temperatures between +5°C and +30°C.	
<b>Density</b>	Part A+B+C mixed: ~ 1.25 kg/l ± 0.03 (at +20°C)	

## TECHNICAL INFORMATION

<b>Shore Hardness</b>	Shore D: 80	(ASTM D 2240)
<b>Tensile Adhesion Strength</b>	> 2.0 N/mm <sup>2</sup> (failure in concrete)	(EN 1542)

## SYSTEM INFORMATION

<b>Systems</b>	Please refer to the System Data Sheet of:	
	<b>Sikafloor® PurCem® HB-21</b>	Heavy to medium duty, broadcasted, light anti-slip PUCEM, hybrid screed
	<b>Sikafloor® PurCem® HB-22</b>	Heavy to medium duty, broadcasted, medium anti-slip PUCEM, hybrid screed
	<b>Sikafloor® PurCem® HB-23</b>	Heavy to medium duty, broadcasted, high anti-slip PUCEM, hybrid screed
	<b>Sikafloor® -29 PurCem®</b>	As a coating for coving mortar

## APPLICATION INFORMATION

<b>Mixing Ratio</b>	Part A : B : C = 1 : 1 : 1.40 (packaging size = 1.50 : 1.50 : 2.10 ) by weight <b>Mix full units only.</b>
<b>Consumption</b>	~ 0.4 – 1.0 kg/m <sup>2</sup> (depending on the system build-up)
<b>Ambient Air Temperature</b>	+10°C min. / +40°C max.
<b>Relative Air Humidity</b>	85% max.
<b>Dew Point</b>	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.
<b>Substrate Temperature</b>	+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<sup>2</sup>.

## 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®-31 PurCem® allow:

Substrate temperature	Minimum	Maximum
+10°C	16 hours	72 hours
+20°C	8 hours	48 hours
+30°C	4 hours	24 hours
+35°C	4 hours	24 hours

Times are approximate and will be affected by changing ambient and substrate conditions, particularly temperature and relative humidity.

## 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/mm<sup>2</sup>. 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

A low speed electric stirrer (300-400 r.p.m.) and an Exomixer-type mixing paddle suited to the size of the mixing container to minimise the air entrapment.

### APPLICATION

On smooth screeds apply the mixed Sikafloor®-31 PurCem® using a short or medium nap roller directly from a paint tray. On broadcasted screeds pour the material and spread it using a squeegee and then back-roll the excess using a medium knap roller.

### 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®-31 PurCem® in a confined space, to prevent excessive ambient humidity.

Freshly applied Sikafloor®-31 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 Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

## LOCAL RESTRICTIONS

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

## 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) is 140 g/l (Limit 2010), for the ready to use product. Sikafloor®-31 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.

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