

SYSTEM DATA SHEET

Sikafloor® PurCem® HM-20

HIGH STRENGTH-TROWEL GRADE, HEAVY DUTY POLYURETHANE CEMENT HYBRID FLOORING SYSTEM

PRODUCT DESCRIPTION

Sikafloor® PurCem® HM-20 is made with polyurethane cement technology and is part of the Sikafloor® PurCem® flooring range. Sikafloor® PurCem® HM-20 is a trowel applied coloured modified polyurethane mortar screed resin suitable for floors subject to temperature shocks and heavy loading, abrasion and chemical exposure.

It has a textured aggregate surface providing medium to heavy profile slip resistance and is typically installed at 6 to 9 mm thick.

USES

Sikafloor® PurCem® HM-20 may only be used by experienced professionals.

- Food processing plants, in wet or dry process areas, freezers and coolers, thermal shock areas
- Chemical plants
- Laboratories
- Workshops

CHARACTERISTICS / ADVANTAGES

- High chemical resistance. Resists a wide range of organic and inorganic acids, alkalis, amines, salts and solvents
- Good resistance to high temperature changes
- Good resistance to fire
- Steam cleanable at 9 mm thick
- High mechanical and abrasion resistance
- Easy application. Normally, no concrete primer or sealer required
- Fluid consistency requires less labour to install than conventional heavy duty modified PU trowel grade screeds
- Easy to clean and maintain
- Seamless, non-taint, odourless

- Textured, matt surface
- Tolerant to moisture in the substrate
- Very good life cycle cost performance

ENVIRONMENTAL INFORMATION

- Very low VOC emissions, as tested externally at Eurofins, according to AgBB guidelines, test report 392-2014-00087003A_03.
- Conformity with LEED v2009 IEQc 4.2: Low-Emitting Materials - Paints and Coatings

APPROVALS / STANDARDS

- Screed material for floor screeds according to EN 13813:2002, Declaration of Performance 02 08 02 02 001 0 000002 1088 and provided with the CE-mark.
- Surface protection coating for concrete according to EN 1504-2:2004, Declaration of Performance 02 08 02 02 001 0 000002 1088, certified by notified factory production control body 0086, certificate of conformity of factory production control 541325, and provided with the CE-mark.
- Conforms to the requirements of: EN1186, EN 13130, prCEN/TS 14234 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. Test report by ISEGA, 32758 U11 and 32759 U11, both dated December 6th, 2011.
- Certified as suitable for use in food and beverage facilities that operate in accordance with a HACCP based Food Safety Programme.
- Compliant with USDA flooring requirements
- Canadian Food Inspection Agency acceptance for use in food plants in Canada.
- 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

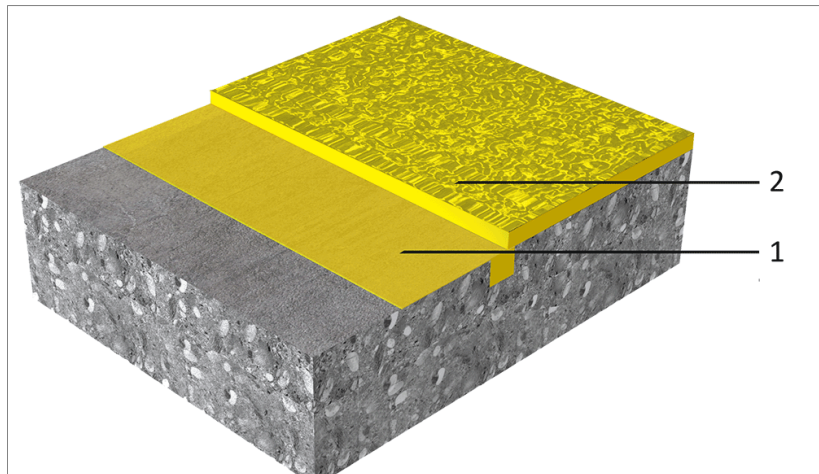
from Exova Warrington Fire for Sikafloor®-20 PurCem® No.317045, dated 24th of March, 2012

- 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. n° 75221-151, dated January 11th, 2012
- Slip resistance properties according to DIN 51130 tested at Roxeler Test Institute, certificate No. 020068-18-1
- Cleanability. Clean Room Suitable Material (Riboflavin test) test report no. SI 1403-695, Fraunhofer Institute for Manufacturing and Engineering and Automation IPA.
- Biological resistance. Clean Room Suitable Material test report no. SI 1403-695, Fraunhofer Institute for Manufacturing and Engineering and Automation IPA.

SYSTEM INFORMATION

System Structure

Sikafloor® PurCem® HM-20



Layer	Product
1. Scratch coat (optional)	Sikafloor® -21 PurCem®
2. Body coat	Sikafloor®-20 PurCem®

As optional primers Sikafloor®-150/-151 + quartz sand 0.3–0.8 mm broadcast to excess can be used. Please refer to the individual Product Data Sheet.

Composition	Water-based polyurethane cement hybrid
Appearance	Textured surface, matt finish
Colour	Beige, Golden Yellow, Carmine Red, Ultramarine Blue, Yellow Green, Pebble Grey, Dusty Grey, Agate Grey
Nominal Thickness	~ 6-9 mm
Volatile organic compound (VOC) content	Very low content of volatile organic compounds, it fulfils the stringent demands for indoor air quality and low VOC emitting products AgBB.

TECHNICAL INFORMATION

Water Absorption	0 %	(CP BM2/67/2)
Shore D Hardness	~85	(ASTM D 2240)
Abrasion Resistance	Class "Special" Severe abrasion resistance	(BS 8204 Part 2)
	AR 0.5	(EN 13892-4)
	Class A6	(EN 13892-3)
	< 3000 mg (H-22/1000/1000)	(ASTM D 4060-01)
Resistance to Impact	Class II ($\geq 20\text{Nm}$)	(ISO 6272)
	2 pounds/30 inches (3 mm thick)	(ASTM D 2784)
Indentation	0	(MIL – PFR 24613)
Compressive Strength	>60 N/mm ² after 28 days at +23 °C / 50 % r.h.	(BS EN 13892-2)
Tensile Adhesion Strength	Concrete failure	(EN1542)
Reaction to Fire	B _{fl} -s1	(EN 13501-1)
Chemical Resistance	Please refer to Sikafloor® PurCem® chemical resistance guide. Contact Sika technical service for specific information.	
Thermal Resistance	6 mm -25 °C to +80 °C	9 mm -40 °C to +120 °C
	Sikafloor® PurCem® HM-20 is fully resistant to liquid spillage and discharge. Sikafloor® PurCem® HM-20 is designed to withstand thermal shock caused by steam cleaning when thickness is 9 mm.	
Permeability to Water Vapour	0.148 g/h/m ² (6.1 mm)	(ASTM E-96)
Capillary Absorption	< 0.016 kg/(m ² ×h ^{0.5})	(EN 1062-3)
USGBC LEED Rating	Conforms Section EQ (Indoor Environmental Quality), Credit 4.2 Low-Emitting Materials Paints and Coatings. Calculated VOC content ≤ 50 g/l	
Coefficient of Friction	Rubber: 1.25 Steel: 0.4	(ASTM D 1894-61T)
Skid / Slip Resistance	R 10 V4	(DIN 51130)

APPLICATION INFORMATION

Consumption	Layer	Product	Consumption
	1. Scratch coat (optional)	Sikafloor®-21 PurCem®	~1.0-3.0 kg/m ²
	2. Body coat	Sikafloor®-20 PurCem®	~2.0 kg/m ² /mm
	Consumptions are theoretical and do not include any wastage, additional material need due to porosity, substrate profile etc.		
Product Temperature	Please refer to the individual Product Data Sheet		
Ambient Air Temperature	+10 °C min / +40 °C max		
Relative Air Humidity	80 % 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 max			
Substrate Moisture Content	Sikafloor® PurCem® HM-20 can be installed on substrates with higher moisture content. The substrate needs to be visibly dry and have an adequate pull-off strength min 1.5 N/mm ² . No ponding water. Check for rising moisture.			
Applied Product Ready for Use	Temperature	Foot traffic	Light traffic	Full cure
	+10 °C	~24 hours	~36 hours	~7 days
	+20 °C	~12 hours	~18 hours	~5 days
	+30 °C	~8 hours	~15 hours	~3-4 days

Note: Times are approximate and will be affected by changing ambient conditions and substrate conditions

PRODUCT INFORMATION

Packaging	Please refer to the individual Product Data Sheet
Shelf Life	Please refer to the individual Product Data Sheet
Storage Conditions	Please refer to the individual Product Data Sheet

MAINTENANCE

CLEANING

Please refer to Sikafloor®- Cleaning Regime.

FURTHER DOCUMENTS

Please refer to:

- Sika® Information Manual Mixing and Application of Flooring Systems
- Sika® Information Manual Surface Evaluation & Preparation
- Sikafloor® PurCem® Product Data Sheets

LIMITATIONS

- 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 discolouration 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 scrub-

bing 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

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.

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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