

## PRODUCT DATA SHEET

# Sikafloor®-21 PurCem® FG

### Self-Levelling Polyurethane-Cement Floor Topping

#### DESCRIPTION

Sikafloor®-21 PurCem® FG is a three part, water based, high strength, medium duty, coloured polyurethane self-smoothing topping suitable for floors subject to abrasion, chemical exposure and other physical aggression.

#### USES

Sikafloor®-21 PurCem® FG may only be used by experienced professionals.

Sikafloor®-21 PurCem® FG is ideally suited for the following areas:

- Chemical processing
- Food processing and wet areas
- Brewing and dairy (clean areas)
- Engineering process areas
- Heavy duty traffic and plant areas
- Warehouse / logistics areas

#### CHARACTERISTICS / ADVANTAGES

- Excellent resistance to organic and inorganic acids, alkalis, fuel and hydraulic oils, aromatic and aliphatic solvents
- Resists bacterial growth, fungi, mould, and mildew
- Durable and resistant to abrasion and impact

#### PRODUCT INFORMATION

<b>Composition</b>	Water based PU with selected aggregates
<b>Packaging</b>	20 kg sets (Parts A+B+C)
<b>Appearance / Colour</b>	Seamless matt, smooth finish Standard colour available: red, green, cream, yellow, grey, light grey
<b>Shelf Life</b>	6 months from the date of production
<b>Storage Conditions</b>	Store properly in original, unopened and undamaged sealed packaging, in dry conditions at temperatures between +10 °C and +30 °C. Protect from direct sunlight.
<b>Density</b>	~1.9 kg/l

#### TECHNICAL INFORMATION

<b>Abrasion Resistance</b>	0.1 gms / 1 000 gms loading 1 000 rpm	(ASTM D4060-19, Taber Abraser)
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<b>Compressive Strength</b>	~50 N/mm <sup>2</sup>	(ASTM C942)
<b>Tensile Strength in Flexure</b>	~21 N/mm <sup>2</sup>	(ASTM C348:2002)
<b>Tensile Strength</b>	~7 N/mm <sup>2</sup>	(ASTM D638-14)
<b>Coefficient of Thermal Expansion</b>	3.5 X 10 <sup>-5</sup> °C	(BS EN 1770)
<b>Chemical Resistance</b>	Resistance to many chemicals. Please ask for detailed chemical resistance table.	
<b>Temperature Resistance</b>	The product is not designed to withstand thermal shock.	
<b>Service Temperature</b>	For 4 mm thickness	-5 °C min. / +80 °C max.
	For 6 mm thickness	-5 °C min. / +90 °C max.

## APPLICATION INFORMATION

Consumption	Layer	Product	Consumption
	Scratch coat +	Sikafloor®-21 PurCem®	~1.5–2.0 kg/m <sup>2</sup>
	Lightly broadcast with quartz sand 0.3–0.9 mm	FG	~2.0–2.5 kg/m <sup>2</sup>
	Body coat	Sikadur®-501	
		Sikafloor®-21 PurCem®	~1.9 kg/m <sup>2</sup> /mm
		FG	

Important Note: For medium duty flooring requirements, the total thickness of Sikafloor®-21 PurCem® FG is 4–6 mm thick.

<b>Layer Thickness</b>	4 mm min. / 6 mm 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>	15 °C min. / 30 °C max.

Pot Life	Temperature	Time
	+8 °C	~35 minutes
	+15 °C	~25 minutes
	+30 °C	~18 minutes

Curing Time	Substrate Temperature	Foot Traffic	Light Traffic	Full Cure
	+25 °C	16 hours	24 hours	7 days
	+35 °C	12 hours	18 hours	5 days

All cure times are approximate and will be affected by changing ambient conditions.

<b>Waiting Time / Overcoating</b>	Before applying Sikafloor®-21 PurCem® FG on Sikafloor®-21 PurCem® FG, allow:		
	<b>Substrate Temperature</b>	<b>Minimum</b>	<b>Maximum</b>
	25 °C	~16 hours	~48 hours

Always ensure the primer has fully hardened before applying the top layer.

## APPLICATION INSTRUCTIONS

### SUBSTRATE QUALITY / PRE-TREATMENT

The concrete substrate must be sound and of sufficient compressive strength (minimum 25 N/mm<sup>2</sup>) with a minimum pull-off strength of 1.5 N/mm<sup>2</sup>. The substrate must be dry and free from all contamin-

ants such as oil, grease, coatings and surface treatments, etc. If in doubt, apply a test area first. Concrete substrates should be prepared mechanically using abrasive blast cleaning or scarifying equipment to remove cement laitance and achieve a profiled open texture surface. Weak concrete must be removed and surface defects such as blow holes and voids must be fully exposed.

Repairs to substrate, filling of blow holes / voids and surface levelling must be carried out using appropriate products from the Sikafloor®, Sikadur® and Sikagard® range of materials.

High spots shall be removed by grinding.

All dust, loose and friable material must be completely removed from all surfaces before application of the product, preferably by brush and/or vacuum.

## MIXING

Prior to mixing, stir Part A (resin) well, then add all of Part B (hardener) and mix both liquid parts thoroughly with a low speed electric stirrer for a minimum of one minute until a uniform mix has been achieved. Use a low speed drill (500 rpm) and a helical mixer to mix Sikafloor®-21 PurCem® FG Parts A and B.

Gradually add Part C (aggregate) to the mixed resin and mix for a further 3 minutes minimum, until a uniform moist mix is obtained.

## APPLICATION

Prior to application, confirm substrate moisture content, r.h. and dew point are within limits of application.

Pour the mixed Sikafloor®-21 PurCem® FG onto the substrate and spread evenly with a trowel or rake to the required levels, achieving a flat surface. Light spike rolling should be carried out within 3 minutes of application in order to avoid interfering with the film gel time.

## CLEANING OF TOOLS

Clean all tools and application equipment with water immediately after use. Hardened or cured material can only be mechanically removed.

## FURTHER INFORMATION

Refer to Method Statement "Application of Sikafloor®-21 PurCem® FG"

## IMPORTANT CONSIDERATIONS

- Freshly applied Sikafloor®-21 PurCem® FG should be protected from damp, condensation and water for at least 24 hours.
- To ensure the finished system remains fully bonded to the substrate, it is recommended that retaining slots of 5 mm deep by 5 mm wide are cut into the substrate, running at 150 mm from and parallel to the walls and all edges.
- Retaining slots are also recommended at day joints.
- Always ensure good ventilation when using Sikafloor®-21 PurCem® FG in a confined spaces.

### Sika Kimia Sdn. Bhd.

Lot 689, Nilai Industrial Estate,  
71800 Nilai, Negeri Sembilan D.K.  
Malaysia  
Phone: +606-7991762  
e-mail: info@my.sika.com  
Website: www.sika.com.my



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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.

## 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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