

# PRODUCT DATA SHEET

## Sikafloor®-49 PurCem®

High strength, chemical and thermal shock resistant polyurethane hybrid render and coving mortar (Formerly FLORGIENE MDC)

### DESCRIPTION

Sikafloor®-49 PurCem® is a three-component, water based polyurethane hybrid rendering, detailing and coving mortar. It has high impact and mechanical resistance and good chemical and wearing resistance.

### USES

Sikafloor®-49 PurCem® may only be used by experienced professionals.

Sikafloor®-49 PurCem® is used as a coving mortar, detailing and vertical rendering for Sikafloor® PurCem® flooring systems such as in:

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

- Beverage production
- Warehousing and storage
- Confectionery and bakery production
- Electronic component manufacture and assembly
- Pharmaceutical plants
- Dairy and milk plants
- Meat, poultry and fish processing plants
- Hotel kitchens
- Cold storages

### CHARACTERISTICS / ADVANTAGES

- Designed specifically for trowel applications
- Good resistance to specific chemicals
- High mechanical and wear resistance
- Thermal expansion properties similar to concrete
- Tolerant to substrates with high moisture content
- Odourless
- Non-tainting
- Low VOC emissions

### PRODUCT INFORMATION

<b>Composition</b>	Water-based polyurethane cement hybrid	
<b>Packaging</b>	Part A+B+C pre-batched	16.0 kg set
	Part A	1.0 kg container
	Part B	1.1 kg container
	Part C	13.9 kg bag
<b>Shelf life</b>	Part A	6 months from date of production. <b>Protect from freezing.</b>
	Part B	6 months from date of production. <b>Protect from freezing.</b>
	Part C	6 months from date of production. <b>Protect from humidity.</b>
<b>Storage conditions</b>	The product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +30 °C.	

Appearance and colour	Part A	Whitish liquid
	Part B	Brown liquid
	Part C	Coloured powder
	Cured appearance	Matt finish
	Cured colour	Grey

Density	~2.20 kg/L (Part A+B+C mixed, +27 °C)	(EN ISO 2811-1)
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## TECHNICAL INFORMATION

Shore D Hardness	~90 (7 d, +30 °C)	(ASTM D2240)
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Compressive strength	~40 N/mm <sup>2</sup> (28 d, +23 °C)	(ASTM C579)
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Tensile adhesion strength	> 2 N/mm <sup>2</sup> (failure in concrete)	(EN 1542)
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## SYSTEM INFORMATION

System structure	<p>Use the products mentioned below as indicated in their respective Product Data Sheets. For additional information, please refer to the application Method Statement.</p> <p><b>Substrate primer:</b> Sikafloor®-167 Primer blinded with 0.4–0.7 mm quartz sand. Re-prime as Sikafloor®-49 PurCem® has to be applied vertically in tacky primer.</p> <p><b>Coving, detailing or vertical mortar:</b> Sikafloor®-49 PurCem®</p> <p><b>Seal coat:</b> 1 × Sikafloor®-31 PurCem® IN</p> <p>Note: These system configurations must be fully complied with as described and may not be changed.</p>
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## APPLICATION INFORMATION

Mixing ratio	Part A : Part B : Part C = 1.0 : 1.1 : 13.9 (by weight)
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Consumption	<p>~2.2 kg/m<sup>2</sup> per mm</p> <p>These figures are theoretical and do not allow for any additional material due to surface porosity, surface profile, variations in level and wastage etc.</p>
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Material temperature	Pre-condition material for 24 h between +20 °C to +28 °C
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Ambient air temperature	+10 °C min. / +35 °C max.
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Relative air humidity	80 % max.
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Dew point	Beware of condensation. The substrate and uncured applied product must be at least +3 °C above dew point to reduce the risk of condensation or blooming on the surface of the applied product. Low temperatures and high humidity conditions increase the probability of blooming.
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Substrate temperature	+10 °C min. / +35 °C max.
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Substrate moisture content	<p>Please refer to the Product Data Sheet of base layer or primer.</p> <p>No ponding water may be present on the surface. Check for rising moisture. The substrate must be visibly dry and must have a minimum pull-off strength of 1.5 N/mm<sup>2</sup>.</p>
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Pot Life	<b>Temperature</b>	<b>Pot life (100 g mass)</b>
	+10 °C	~35 min
	+20 °C	~22 min
	+30 °C	~15 min
	+35 °C	~12 min

## Waiting time to overcoating

Before overcoating the product allow:

Substrate temperature	Minimum	Maximum
+10 °C	20 hours	72 hours
+20 °C	10 hours	48 hours
+30 °C	5 hours	24 hours
+35 °C	5 hours	24 hours

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

Note: If a primer other than a scratch coat of Sikafloor® PurCem® is applied, refer to the relevant PDS of the chosen product for curing times. Ensure that the primer or scratch coat is fully cured before the application of subsequent Sikafloor® PurCem® layers.

## Applied product ready for use

Temperature	Foot traffic	Light traffic	Full cure
+10 °C	~30 h	~48 h	~7 d
+20 °C	~18 h	~36 h	~5 d
+30 °C	~12 h	~24 h	~4 d
+35 °C	~10 h	~20 h	~4 d

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

### IMPORTANT

#### Dirt pick up in slow curing conditions

In some slow curing conditions, soiling of the surface may occur when opened to foot traffic, even though mechanical properties have been achieved.

1. Remove dirt using a dry mop or cloth.
2. Do not scrub the product with water for the first three days.

## 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

- Sika Method Statement: Evaluation and preparation of surfaces for flooring systems
- Sika Method Statement: Mixing & Application of Flooring Systems
- Sika Method Statement: Sikafloor® PurCem®

## ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

## APPLICATION INSTRUCTIONS

### EQUIPMENT

#### MIXING EQUIPMENT

- Electric single paddle mixer (300 to 400 rpm)
- Electric double paddle mixer (> 700 W, 300 to 400 rpm)
- Forced action / rotating pan / double paddle or

trough type mixer (300 to 400 rpm)

### APPLICATION EQUIPMENT

- Flat, round edge steel trowel
- Coving tool

### SUBSTRATE QUALITY

- 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 clean, dry and free of all contaminants such as oil, grease, coatings and surface treatments, etc.

### SUBSTRATE PREPARATION

#### IMPORTANT

#### Incorrect treatment of cracks

The incorrect assessment and treatment of cracks may lead to a reduced service life and reflective cracking.

- Concrete substrates must be prepared mechanically using abrasive blast cleaning or scarifying equipment or diamond grinding machine to remove cement laitance and achieve an open textured surface.
- Weak concrete must be removed and surface defects such as blow holes and voids must be fully exposed.
- Repairs to substrate, filling of blowholes/voids and surface levelling must be carried out using appropriate products from the Sikafloor®, Sikadur® and Sikagard® range of materials.
- High spots can be removed by grinding.
- All dust, loose and friable material must be com-

pletely removed from all surfaces before application of the product, preferably by brush and/or vacuum.

- 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.

## MIXING

### IMPORTANT

#### Mix full units only

1. Mix Part A (resin) for ~30 seconds.
2. Add Part B (hardener) to Part A.
3. Mix Part A + B continuously for 30 seconds until a uniformly coloured mix is achieved.
4. After mixing for 30 seconds, gradually add Part C while you continue mixing.
5. After combining all parts, mix for an additional 2 minutes, until a uniform mix is achieved.  
Note: At ambient temperatures less than +15 °C mix between 30 seconds and 1 minute longer.
6. To ensure thorough mixing, pour materials into another container and mix again to achieve a smooth and uniform mix.
7. During the final mixing stage, scrape down the sides and bottom of the mixing container with a flat or straight edge trowel at least once to ensure complete mixing.

## APPLICATION

### IMPORTANT

#### Protecting the material after application

After application, protect the system from damp, condensation and direct water contact for at least 24 hours.

### IMPORTANT

#### Protect from overhead leaks and condensation

Protect the product during application from pipe condensation or any overhead leaks.

### IMPORTANT

#### Ventilation in confined spaces

Always ensure good ventilation when applying the product in a confined space.

### IMPORTANT

#### Application on polymer modified cement mortars

Do not apply the product on polymer modified cement mortars if the mortar expands when sealed with an impervious resin.

### IMPORTANT

#### Waiting time for foodstuff

Allow a minimum of 48 hours after application before placing foodstuff in the same area.

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## PRIMER

1. Mix and apply the primer according to its corresponding Product Data Sheet, using a brush or roller to provide uniform coverage.
2. Broadcast 0.4–0.7 mm quartz sand.
3. After drying apply second coat of primer.

Note: The primer must be tacky during the application of Sikafloor®-49 PurCem®. Mix and apply only the amount of primer which can be overlaid before it cures.

## COVING MORTAR

1. Apply the product onto the primed surface.
2. Form a cove in the required dimensions and radius with a coving tool.

Note: A seamless finish can be achieved if a 'wet on wet' application is maintained.

## CLEANING OF EQUIPMENT

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

## 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 exact product data and uses.

## 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.

#### Product Data Sheet

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