

Sikafloor[®]-21 PurCem[®] FG

Self Levelling Polyurethane-Cement Floor Topping

Construction

Description	Sikafloor-21 PurCem FG is a three part, water-based, high strength, medium duty, self smoothing topping suitable for floors subject to abrasion, chemical exposure and other physical aggression.		
Uses	Sikafloor-21 PurCem is ideally suited for the following areas: <ul style="list-style-type: none"> ▪ Chemical processing. ▪ Food processing / wet areas. ▪ Brewing/dairy (clean areas). ▪ Engineering process areas. ▪ Heavy duty traffic and plant areas ▪ Warehouse / logistics areas. 		
Advantages	<ul style="list-style-type: none"> ▪ Excellent resistance to organic and inorganic acids, alkalis, fuel and hydraulic oil, aromatic and aliphatic solvents ▪ Durable and resistant to abrasion and impact 		
Storage and Shelf Life	Approximately six (6) months from date of manufacture when stored in its unopened original containers in a dry place at temperatures between +10°C and +30°C.		
Product Data			
Colours	Light Grey, Red		
Finishing	Seamless matt, smooth finish		
Packaging	20 kg kit (Parts A + B + C)		
Instructions for Use			
Consumption	Primer		
	Sikafloor 156	~ 0.3 to 0.5 kg/m ² per coat	
	Screed		
	Sikafloor 21 PurCem FG	3 mm thickness	5.5-6.0 kg / m ²
		4 mm thickness	7.3-8.0 kg / m ²
		5 mm thickness	9.2-10.0 kg / m ²
		6 mm thickness	11.0-12.0 kg / m ²
	These figures are theoretical and do not provide for any additional material required due to surface porosity, surface profile, variations in level or wastage, etc.		
Substrate Quality	The concrete substrate must be sound and of sufficient compressive strength (min. 25 N/mm ²) with a minimum pull-off strength of 1.5 N/mm ² .		
	The surface must be clean, dry and free of all contaminants e.g. dirt, oils, grease, coatings and surface treatments etc. If in doubt, apply a test area first.		

Substrate Preparation / Priming

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 product from the Sikafloor, Sikadur and Sikagard range of materials.

High spots can 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.

Technical Data

Chemical Base Water-based PU with selected aggregate

Density 1.85-1.95 kg per litre

Layer Thickness 3 mm min. / 6 mm max.

Thermal Expansion Coefficient 3.5×10^{-5} per °C

Service Temperatures 60°C maximum (intermittent exposure)

Mechanical / Physical Properties

Compressive Strength ~ 40 N/mm²

Flexural Strength ~ 16 N/mm²

Bond Strength ~1.5 N/mm² (failure in concrete)

(1.5 N/mm² is the recommended minimum pull-off strength of the concrete substrate)

Abrasion Resistance ~ 1200 mg loss, Taber abrasion

Resistance

Chemical Resistance Spillage resistance to most dilute and concentrated organic and inorganic acids, dilute and concentrates alkalis, fats, oils and organic solvents.

For resistance to specific chemicals, please contact our Technical Department.

Thermal Resistance The product is designed to withstand thermal shock.

Application Conditions / Limitations

Substrate Temperature +15°C min. / +30°C max.

Relative Air Humidity 85% max.

Application Instructions

Mixing Time Prior to mixing, stir Part A well and empty into a clean mixing drum. Then add all of Part B and mix both liquid parts thoroughly with a low speed electric stirrer for one (1) minute until a uniform mix has been achieved.

Then gradually add Part C (aggregate) to the mixed resin parts and mix for a further one (1) minute, until a uniform moist mix is obtained.

Mixing Tools Use a heavy-duty low speed drill (500 rpm) and a helical mixer to mix Sikafloor -21 PurCem FG.

Application Method / Tools Prior to application, confirm substrate moisture content r.h. and dew point. If >6% pbw moisture content, Sikafloor EpoCem may be applied as a T.M.B. (temporary moisture barrier) system.

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 rolling with a long pile roller should be carried out immediately 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 / cured material can only be mechanically removed.

Potlife 15 minutes @25°C

Waiting Time / Overcoatability Before applying Sikafloor 21 PurCem FG on Sikafloor 156, allow:

Substrate Temperature	Waiting Time	
	Minimum	Maximum
+20°C	~ 12 hours	~ 72 hours

Always make sure primer is fully cured before application.

Notes on Application / Limitations

- Freshly applied Sikafloor-21 PurCem should be protected from damp, condensation and water and temperatures below 5°C 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 formed, running at 150 mm from the parallel to the walls and all edges.
- Retaining slots are also recommended at day joints.
- For older floors, additional keying may be achieved by providing 8 mm x 8 mm grooves diagonally into the floor every m² of floor area.
- When the floor surface is exposed to UV, slight yellowing may occur without affecting its mechanical properties.
- Always ensure good ventilation when using Sikafloor-21 PurCem FG in a confined space.

Curing Details

Applied Product ready for use

Substrate Temperature	Foot Traffic	Light Traffic	Full Cure
25°C	~ 10 hours	~ 24 hours	~ 7 days
35°C	~ 8 hours	~ 18 hours	~ 5 days

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

Health and Safety Information

Protective Measures

During application in closed rooms, pits and shafts, etc., sufficient ventilation must be provided. Keep away from open light including welding.

Use of basic principles of industrial hygiene, such as rubber gloves, goggles and protective clothing will enable this product to be used safely. Change soiled work clothes and wash hands before eating after finishing work.

Local regulations as well as health and safety advice on packaging labels must be observed.

Important Notification

The information, and, in particular, the recommendations relating to the application and end-use of Sika's 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 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 proprietary rights of third parties must be observed. All orders are accepted subject of our terms and conditions of sale. Users should always refer to the most recent Australian version of the Technical Data Sheet for the product concerned, copies of which will be supplied on request.

PLEASE CONSULT OUR TECHNICAL DEPARTMENT FOR FURTHER INFORMATION.

