

Sikafloor®-20 PurCem® FG

Heavy duty coloured polyurethane floor screed

Product Description

Sikafloor®-20 PurCem® FG is a 3-part, water-based, high strength, coloured polyurethane resin floor screed suitable for floors subject to heavy loading, abrasion and chemical exposure.

Uses

In areas subject to heavy loading, abrasion and high chemical exposure, to provide a 6 to 9 mm thick, hard-wearing surface, such as in:

- Chemical processing
- Food processing and wet areas
- Brewing and dairy (clean areas)
- Engineering process areas
- Warehouses and logistics areas
- Cold rooms

Characteristics / Advantages

- Excellent chemical resistance
- High mechanical resistance
- High abrasion resistance
- Steam cleanable at 9 mm thickness
- Thermal resistance
- Slip resistance
- Easily maintained
- Fast curing
- Easy to apply
- Durable
- Jointless
- Matt finish

Product Data

Form

Colours

Standard colours: Red, Green, Cream, Yellow, Grey, Light Grey.

Finish

A matt, anti-skid finish

Packaging

32 kg sets (Parts A + B + C)



Storage

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| Storage Conditions / Shelf Life | 6 months from the date of production if stored properly in original, unopened and undamaged packaging in dry conditions at temperatures between +10°C and +30°C. Protect from direct sunlight. |
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Technical Data

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| Chemical Base | Water-based PU with cementitious aggregate |
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| Layer Thickness | 6 mm min. / 9 mm max. |
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| Thermal Expansion Coefficient | 2.5×10^{-5} per °C |
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| Service Temperatures | ■ For 9 mm thickness | -40°C to +120°C (steam cleanable) |
| | ■ For 6 mm thickness | -5°C to +60°C |

Mechanical / Physical Properties

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| Compressive Strength | ~ 60 N/mm ² |
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| Tensile Strength | ~ 7 N/mm ² |
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| Flexural Strength | ~ 14 N/mm ² |
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| Bond Strength | ~ 1.5 N/mm ² (failure in concrete) (1.5 N/mm ² is the recommended minimum pull-off strength of the concrete substrate) |
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| Abrasion Resistance | ~ 1100 mg loss | (Taber abrasion test) |
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Resistance

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| Chemical Resistance | Spillage resistance to most dilute and concentrated organic and inorganic acids, dilute and concentrated alkalis, fats, oils and organic solvents. For resistance to specific chemicals, please contact our Technical Department. |
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| Thermal Resistance | The product is designed to withstand thermal shock caused by steam cleaning when thickness is 9 mm. |
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System Information

Application Details

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| Consumption | <i>Primer</i> Sikafloor®-155WN | ~ 0.3 to 0.5 kg/m ² per coat |
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| <i>Screed</i> Sikafloor®-20 PurCem® FG | For 6 mm thickness: | ~ 12 kg/m ² |
| | For 9 mm thickness: | ~ 18 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.

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

Application Conditions / Limitations

Substrate Temperature +10°C min. / +30°C max.

Relative Air Humidity 85% 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 blooming on the floor finish.

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 15 seconds until a uniform mix has been achieved.

Then gradually add Part C and mix for a further one minute until a fully homogeneous mortar is obtained.

Mixing Tools Use a heavy-duty low speed drill (500 rpm) and a helical mixer to mix Sikafloor[®]-20 PurCem[®] FG.

Application Method / Tools Prior to application, confirm substrate moisture content, r.h. and dew point. If > 4% pbw moisture content, Sikafloor[®] EpoCem[®] may be applied as a T.M.B. (temporary moisture barrier) system.

Pour the mixed Sikafloor[®]-20 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 and/or cured material can only be mechanically removed.

Potlife

| Temperature | Time |
|-------------|--------------|
| + 25°C | ~ 15 minutes |
| + 35°C | ~ 8 minutes |

Waiting Time / Overcoatability

Before applying Sikafloor[®]-20 PurCem[®] FG on Sikafloor[®]-155WN, 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®-20 PurCem® FG should be protected from damp, condensation, 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 8 mm deep by 8 mm wide are formed, running at 150 mm from and 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®-20 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 approximate and will be affected by changing ambient conditions.

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.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet (available upon request) 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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