

PRODUCT DATA SHEET

Sikafloor®-31 PurCem® IN

Polyurethane cementitious hybrid sealer coating

DESCRIPTION

Sikafloor®-31 PurCem® IN is a three-component, solvent-free, high build, coloured, matt finish coating based on the unique Sikafloor® PurCem® water dispersed polyurethane / cement and aggregate technology. Typically installed as standalone coating for concrete substrates or used as a top coat for Sikafloor® PurCem® broadcast textured finishes. It provides an economical solution that has excellent chemical resistance properties and very good durability against abrasion and mechanical damage.

USES

Sikafloor®-31 PurCem® IN may only be used by experienced professionals.

Sikafloor®-31 PurCem® IN is designed to be used as:

- Standalone, high build coating
- Seal coat for covings and details performed with Sikafloor®-49 PurCem® or other products in the Sikafloor® PurCem® range
- Seal coat for providing an improved aesthetic finish to the products in the broadcast texture range of Sikafloor® PurCem®

As a chemical resistant concrete coating in places such as:

- Food processing plants, in wet or dry process areas, freezers and coolers
- Pharmaceutical plants
- Containment areas
- Chemical process areas

Note: Do not use as standalone coating in areas of steam cleaning as this may lead to delamination due to thermal shock.

CHARACTERISTICS / ADVANTAGES

- Solvent free
- Good wear resistance
- High mechanical resistance
- Good chemical resistance
- Non tainting / odourless
- Low VOC, environment friendly

PRODUCT INFORMATION

| | | |
|----------------------|--|------------------|
| Chemical base | Water-based polyurethane cement hybrid | |
| Packaging | Part A+B+C pre-batched | 4.7 kg set |
| | Part A | 1.6 kg container |
| | Part B | 1.4 kg container |
| | Part C | 1.7 kg bag |

| | | |
|------------|--------|---|
| Shelf life | Part A | 6 months from date of production Protect from freezing. |
| | Part B | 6 months from date of production Protect from freezing. |
| | Part C | 6 months from date of production Protect from humidity. |

Storage conditions The product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +30 °C.

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|---------------------|------------------|-----------------|
| Appearance / Colour | Part A | Coloured liquid |
| | Part B | Brown liquid |
| | Part C | White powder |
| | Cured appearance | Matt finish |

Please consult with Sika representative for available colours.
IMPORTANT
 When the product is exposed to direct UV exposure (sun, lamp, skylight, etc.), there may be some discolouration and colour variation. This has no influence on the function and performance of the product.
IMPORTANT
 For colour matching: Apply colour sample and confirm selected colour under real lighting conditions.
IMPORTANT
 Colour uniformity cannot be completely guaranteed from batch to batch. Do not mix batch numbers in a single area.

Density ~1.48 kg/L (Part A+B+C mixed, +27 °C) (EN ISO 2811-1)

TECHNICAL INFORMATION

Shore D hardness ~82 (7 days, +23 °C) (ASTM D2240)

Abrasion resistance ~65 mg (CS-10/1000/1000, 7 days, +23 °C) (ASTM D4060)

Tensile adhesion strength > 2.0 N/mm² (failure in concrete) (EN 1542)

Chemical resistance Resistant to many chemicals. Contact Sika Technical Services for additional information.

SYSTEM INFORMATION

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|---------|--|---|
| Systems | Seal coat: | |
| | Base coat | Sikafloor®-41 PurCem® / Sikafloor®-44 PurCem® / Sikafloor®-49 PurCem® |
| | Seal coat | 1–2 × Sikafloor®-31 PurCem® IN |
| | Standalone coating: | |
| | Primer | Sikafloor®-161 HC / Sikafloor®-167 Primer |
| | Seal coat | 1–2 × Sikafloor®-31 PurCem® IN |
| | Seal coat for broadcast finish: | |
| | Base coat | Sikafloor®-41 PurCem® |
| | Broadcast | Sika® Quartz 02 IN |
| | Seal coat | 1–2 × Sikafloor®-31 PurCem® IN |

Note: These system configurations must be fully complied with as described and may not be changed.

APPLICATION INFORMATION

Mixing ratio Part A : Part B : Part C = 1.6 : 1.4 : 1.7

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| Consumption | ~0.200–0.250 kg/m ² per coat | |
| Ambient air temperature | +10 °C min. / +35 °C max. | |
| Relative air humidity | 85 % max. | |
| 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. | |
| Substrate temperature | +10 °C min. / +35 °C max. | |
| Substrate moisture content | Please refer to the Product Data Sheet of base layer or primer. 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 ² . | |
| Pot life | Temperatures | Pot life |
| | +10 °C | ~35 min |
| | +20 °C | ~25 min |
| | +30 °C | ~18 min |

| | | | |
|-----------------------------------|--|----------------|----------------|
| Waiting time / Overcoating | Before applying Sikafloor®-31 PurCem® IN on Sikafloor®-41 / -44 / -49 PurCem® allow: | | |
| | Substrate temperature | Minimum | Maximum |
| | +20 °C | 16 hours | 72 hours |
| | +30 °C | 8 hours | 48 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.

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|--------------------------------------|--------------------|---------------------|----------------------|------------------|
| Applied product ready for use | Temperature | Foot Traffic | Light Traffic | Full Cure |
| | +10 °C | ~42 h | ~78 h | ~7 d |
| | +20 °C | ~18 h | ~60 h | ~6 d |
| | +30 °C | ~12 h | ~48 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 DOCUMENTS

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

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 (300–400 rpm)

APPLICATION EQUIPMENT

- Squeegee
- Short / medium pile roller

SUBSTRATE QUALITY

- The substrate can be concrete or existing Sikafloor® PurCem® products applied to concrete.
- The concrete substrate must be sound and of sufficient compressive strength (minimum 25 N/mm²) with a minimum pull off strength of 1.5 N/mm².
- The substrate must be clean, dry and free of all contaminants such as oil, grease, coatings and surface treatments, etc.

SUBSTRATE PREPARATION

- 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 completely removed from all surfaces before application of the product, preferably by brush and/or vacuum.
- For best results, applications as seal coat over recent Sikafloor® PurCem® substrates must be carried out within the recommended overcoat time of the product concerned. (See respective PDS for limitations.)
- Grinding or sanding of the Sikafloor® PurCem® screed underneath will increase the bond by providing an additional mechanical key effect to add to the chemical bond between the layers when the application is done within the recommended open time. (See Waiting time for overcoating).

MIXING

IMPORTANT

Mix full units only

1. Mix Part A (resin) until the coloured pigment is dispersed and a uniform colour is achieved.
2. Add Part B (hardener) to Part A.
3. Mix Part A + B continuously for 1 minute until a uniformly coloured mix is achieved.
4. After mixing for 1 minute, gradually add Part C while you continue mixing.
5. After combining all parts, mix for an additional 1 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.

IMPORTANT

Application on substrates other than concrete

Do not apply to unreinforced sand cement screeds, asphaltic or bituminous substrate, glazed tile or nonporous brick, tile and magnesite, copper, aluminium, soft wood or urethane composition, elastomeric membrane and fibre reinforced polyester (FRP) composites.

IMPORTANT

Application on highly porous concrete

Do not apply to highly porous concrete where significant moisture vapour transmission (out-gassing) will occur during application.

SEAL COAT FOR BROADCAST SURFACES

1. Pour the mixed product onto the substrate.
2. Spread the product evenly over the surface with a squeegee.
3. Back roll the surface in two directions at right angles with a medium pile roller.

Note: Maintain a "wet edge" during application for a seamless finish.

Note: Avoid puddles on the surface during application.

SEAL COAT ON SMOOTH SCREEDS OR STANDALONE COATING

1. Apply the mixed Sikafloor®-31 PurCem® IN onto the substrate using a short or medium nap roller directly from a paint tray.
2. Push the resin well into the surface, making sure that the coating fully wets the surface, and then pulling back lightly with the roller to the required thickness.

Note: Apply at least two coats when using as standalone coating.

Note: Avoid puddles on the surface during application.

CLEANING OF TOOLS

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.

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Product Data Sheet

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