BUILDING TRUST

PRODUCT DATA SHEET

Sikafloor®-31 PurCem®

Solvent-free, High Build, Cementitious Urethane Coating

PRODUCT DESCRIPTION

Sikafloor®-31 PurCem® is a three-component, solvent-free, high-build, pigmented, matte finish coating based on the unique Sikafloor PurCem water dispersed polyurethane/cement and aggregate technology. Typically installed as a top coat for Sikafloor PurCem systems. Can also be used as a stand alone coating on concrete surfaces. It provides an economical solution that has excellent chemical resistance properties and very good durability against abrasion and mechanical damage. Application thickness 15–20 mils per coat.

USES

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

- As a high build coating and finish coat for PurCem topping products.
- As a chemical resistant concrete coating.
- Typically used in food processing plants, chemical storage areas, warehouses, washrooms, laboratories, food preparation areas and chemical process plants.

CHARACTERISTICS / ADVANTAGES

- Can be applied on green concrete (typically 7–10 days) after preparation (see surface prep section) and where substrate has tensile bond strength in excess of 218 psi (1.5 MPa).
- Can be applied to concrete substrates where < 100% relative humidity is measured as per ASTM F2170.
- Resists a very wide range of organic and inorganic acids, alkalis, amines, salts and solvents. Consult Sika Technical Service for full details. Refer to the Sika PurCem Chemical Resistance Chart.
- Non-tainting, odorless.
- Good wear resistance from a two coat application, if used as a stand-alone coating.
- Economical and easy to apply.
- Can be applied over partially cured concrete substrates (<10 % surface moisture), full 28 days cure time is not necessary.
- Minimal maintenance costs, superior life cycle cost advantage versus tile.
- Achieves highest performance ratings according to ASTM G21 resistance to fungi and ASTM D3273 resistance to mold growth.
- Meets the requirements of USDA for use in food plants.

PRODUCT INFORMATION

Packaging	Component A: 1 US gal. (3.78 L) 8.53 lb. (3.87 kg) Component B: 0.7 US gal. (2.64 L) 7.33 lb. (3.325 kg) Component C: 1 US gal. (3.78 L) 8.53 lb. (3.87 kg) Components A+B+C: 24.38 lb. (11.06 kg)
Appearance / Color	RAL 7012 Basalt Gray RAL 3009 Oxide Red RAL 7038 Agate Gray RAL 1001 Beige

	RAL 7042 Traffic Grey A
Shelf Life	Components A+B: 1 year in original unopened packaging Component C: 6 months in original unopened packaging. Store dry between 50–77 °F (10–25 °C). **Protect from freezing.**
Storage Conditions	The package must be stored properly in original, unopened and undamaged sealed packaging, in dry conditions at temperatures between 41 °F (5 °C) and 86 °F (30 °C).
Density	11.68 lb./US gal. (1.40 kg/L) (ASTM C-905)

TECHNICAL INFORMATION

Shore D Hardness	~80	(ASTM D-2240)
Flexural Strength	3,582 psi (24.7 MPa)	(ASTM C-580)
Tensile Adhesion Strength	> 254 psi (1.75 MPa) (substrate failure)	(ASTM D-4541)
Chemical Resistance	Please consult Sikafloor Technical Services.	

APPLICATION INFORMATION

Coverage

Approx. 168 ft² (15.6 m²) per unit at 20 mils (0.50 mm)
(The above figure is measured on a 20/40 broadcast aggregate, different aggregate size will influence the material consumption)

Pot Life

Material Temperature	Time
50 °F (10 °C)	~ 35–40 minutes
68 °F (20 °C)	~ 20–25 minutes
86 °F (30 °C)	~ 10–15 minutes

Cure Time

Substrate temperature	Foot traffic	Light traffic	Full cure
50 °F (10 °C)	~ 24 hours	~ 6 days	~ 10 days
68 °F (20 °C)	~ 12 hours	~ 4 days	~ 7 days
86 °F (30 °C)	~ 6 hours	~ 2 days	~ 5 days

Waiting / Recoat Times

Waiting time between coats of Sikafloor® PurCem-31NA:

Substrate temperature	Minimum	Maximum
50 °F (10 °C)	24 hours	7 days
68 °F (20 °C)	12 hours	72 hours
86 °F (30 °C)	6 hours	48 hours

APPLICATION INSTRUCTIONS

SURFACE PREPARATION

Concrete surfaces must be clean and sound. Remove all dust, dirt, existing paint films, efflorescence, exudates, laitance, form oils, hydraulic or fuel oils, brake fluid, grease, fungus, mildew, biological residues or any other contaminants which may prohibit good bond. Prepare the surface by any appropriate mechanical means, in order to achieve a profile equivalent to ICRI-CSP 3. The compressive strength of the concrete substrate should be at least 3,625 psi (25 MPa) at 28 days and a minimum of 218 psi (1.5 MPa) in tensile at the time of application. Repairs to cementitious substrates, filling of blowholes, leveling of irregularities, etc. should be carried out using an appropriate Sika profiling mortar. Contact Sika Technical Service for a recommendation.

MIXING

Mix Ratio: Components A : B : C = Mix full units only
Mixing will be affected by temperature; condition materials for use to 65–75 °F (18–24 °C).

Premix Component A, make sure all pigment is evenly distributed. Empty component A into a clean pail,

gradually add component C (powder) while mixing at low speed for 60–90 seconds and until all powders are wetted out. Gradually add component B (hardener) to the thoroughly mixed A and C parts and mix all components continuously and thoroughly for 3 minutes and until uniform. During the mixing operations, scrape down the sides and bottom of the container with a flat or straight edge trowel at least once to ensure complete mixing (Components A+B+C). **Do not mix more material than can be applied within the working time limits (i.e. Pot Life) at the actual field temperature.**

APPLICATION

Smooth coating: apply one to two coats of Sikafloor®-31 PurCem® to the substrate using a flat squeegee, spread evenly and back roll using a 3/8" nap roller, to required thickness
Slip-resistance top coat: apply a single coat at 15–20 mils using a 3/8" nap roller, lightly broadcast the wet top coat with selected mineral aggregates (selected for texture) and back roll to encapsulate the aggregate.
Slip-resistant broadcast coating: apply a body coat of Sikafloor®-31 PurCem® at a thickness of 15–20 mils, immediately broadcast the wet coating to rejection with selected mineral aggregates (selected for texture). Once the broadcast body coat has cured sufficiently to allow foot traffic, sweep and vacuum the loose unbonded aggregate. Apply a top coat at a thickness of 15–20 mils using a squeegee followed by backrolling to provide a uniform texture and finish. Maintain a 'wet-edge' to avoid lap marks. Over-rolling and delays in the installation of mixed material may cause inconsistencies with visible lap marks in the finished floor. Beware of accelerated cure rates when applying at elevated substrate and ambient temperatures. Maintain consistent thickness throughout the entire area. Gloss levels and visual appearance may vary depending on thickness of material applied.This produc is not designed for negatve side waterproofing.

CLEANING OF TOOLS

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

LIMITATIONS

Notes on Limitations:
Prior to application, measure and confirm Substrate Moisture Content, Ambient Relative Humidity, Ambient and Surface Temperature and Dew Point. During installation, confirm and record above values at least once every 3 hours, or more frequently whenever conditions change (e.g. Ambient Temperature rise/fall, Relative Humidity increase/decrease, etc.).
Material Temperature: Precondition material for at least 24 hours between 65 °F to 75 °F (18 °C to 24 °C).
IMPORTANT: Product must be protected from freezing. If frozen, discard.

Ambient Temperature: Minimum/Maximum 50/85 ˚F (10/30 ˚C)
Substrate Temperature: Minimum/Maximum 50/85 ˚F (10/30 ˚C). Substrate temperature must be at least 5˚F (3˚C) above measured Dew Point. May be used below 50˚F (10˚C) with the addition of Sikafloor 15NA PurCem Accelerator. Refer to Sikafloor 15NA PurCem Accelerator product data sheet for complete application information. Mixing and Application must adhere to Material, Ambient and Substrate temperatures listed above or a decrease in product workability and slower cure rates will occur.

Relative Ambient Humidity:
- Minimum ambient humidity 30 %
- Maximum ambient humidity 85 % (during application and curing)

Dew Point: Beware of condensation!
The substrate must be at least 5 ˚F (3 ˚C) above the Dew Point to reduce the risk of condensation, which may lead to adhesion failure or "blushing" on the floor finish. Be aware that the substrate temperature may be lower than the ambient temperature. Calculate Dew Point from the substrate surface temperature, not the ambient temperature.

Mixing: Do not hand mix Sikafloor materials. Mechanically mix only. Do not thin this product. Addition of thinners (e.g. water, solvent, etc.) will slow cure and reduce ultimate properties of this product. On no account should thinners be added to the mix. Adding thinners will void any applicable Sika warranty.

Application: Avoid puddles during application.
- If steam cleaning is anticipated, do not use Sikafloor®-31 PurCem® as a top coat.
- Do not apply while ambient and substrate temperatures are rising, as pinholes may occur. Ensure there is no vapor drive at the time of application. Refer to ASTM D4263, may be used for a visual indication of vapor drive.
- Freshly applied material should be protected from dampness, condensation and water for at least 24 hrs.
- Color uniformity cannot be completely guaranteed from batch to batch (numbered). Take care when using Sikafloor PurCem products to draw from inventory in batch number sequence, do not mix batch numbers in a single floor area.
- Some colors may produce noticeable shade variations between Sikafloor PurCem systems (e.g. difference between floor and coving mortars). In order to achieve a uniform appearance, the use of top coats (e.g. Sikafloor-31NA) throughout entire area may be required.
- Will discolor over time when exposed to sunlight (UV) and under certain artificial lighting conditions. Use of clear UV resistant top coat may not prevent discoloration of underlying coatings
- Do not apply Sikafloor to concrete substrate containing

aggregates susceptible to ASR (Alkali Silica Reaction) due to risk of natural alkali redistribution below the Sikafloor product after application. If concrete substrate has or is suspected to have ASR (Alkali Silica Reaction) present, do not proceed. Consult with design professional prior to use.
- Any aggregate used with Sikafloor systems must be non-reactive and oven-dried.

BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

OTHER RESTRICTIONS

See Legal Disclaimer.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

LEGAL DISCLAIMER

- **KEEP CONTAINER TIGHTLY CLOSED**
- **KEEP OUT OF REACH OF CHILDREN**
- **NOT FOR INTERNAL CONSUMPTION**
- **FOR INDUSTRIAL USE ONLY**
- **FOR PROFESSIONAL USE ONLY**

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com or by calling SIKA's Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

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