BUILDING TRUST

PRODUCT DATA SHEET

Sikafloor®-31 NA PurCem®

SOLVENT FREE HIGH BUILD, CEMENTITIOUS URETHANE COATING

PRODUCT DESCRIPTION

Sikafloor®-31 NA PurCem® is a three-component, pigmented, matte finish coating based on the unique Sikafloor PurCem water dispersed polyurethane/cement and aggregate technology. Typically installed as a primer and topcoat 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. System can be installed to 15 to 20 mils (0.4 to 0.5 mm) per coat.

USES

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

- As a primer, high build coating and finish coat for PurCem 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. Full 28 days cure time is not necessary.
- Can be applied over partially cured concrete substrates (> 4% mass (pbw –part by weight) as measured with Tramex® CME/CMExpert type concrete moisture meter surface moisture).
- 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 Sikafloor -31 NA Purcem (FS) Chemical Resistance Chart.
- Similar coefficient of thermal expansion to concrete allowing movement with the substrate through normal thermal cycling. It will perform and retain its physical characteristics through a wide temperature range from -40 °F (-40 °C) up to 248 °F (120 °C).
- Non-tainting, odorless.
- Good wear resistance from a two coat application, if used as a stand-alone coating.
- Behaves plastically under impact / deforms but will not crack or debond.
- High abrasion qualities result from its aggregate structure.
- Extra Expansion joints are not necessary; maintain and extend existing expansion joints up through the Sikafloor PurCem Flooring System.
- Minimal maintenance costs, superior life cycle cost advantage versus tile.
- 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:	A+B+C: 24.38 lb (11.06 kg)
Shelf Life	Components A+B: 1 year in original unopened packaging Component C: 6 months in original unopened packaging.	
Storage Conditions	Store dry between 50°- 77°F (10°- 25°C). Protect from freezing .	
Appearance / Color	RAL 7012 Basalt Gray RAL 7038 Agate Gray RAL 7042 Traffic Grey RAL 3009 Oxide Red RAL 1001 Beige	
Density	11.68 lb/US gal. (1.40 kg/L)	ASTM C905 at 73°F (23°C) and 50% R.H.
Volatile organic compound (VOC) content	5 g/L	Components A+B+C

TECHNICAL INFORMATION

Shore D Hardness	80	ASTM D2240 at 73°F (23°C) and 50% R.H
Abrasion Resistance	S-17/1,000 cycles/1,000 g -0.10 g los H-22/1,000 cycles/1,000 g -1.57 g loss	ASTM D4060 at 73°F (23°C) and 50% R.H
Impact Strength	1.67 ft-lb (2.27 joules)	ASTM D2794 at 73°F (23°C) and 50% R.H
Indentation	~ 0%	MIL -PRF -24613 at 73°F (23°C) and 50% R.H.
Flexural Strength	3,582 psi (24.7 MPa)	ASTM C580 at 73°F (23°C) and 50% R.H.
	Thermal Compatibility Pass	ASTM C884 at 73°F (23°C) and 50% R.H
Tensile Strength	1,552 psi (10.7 MPa	ASTM C307 at 73°F (23°C) and 50% R.H.
Softening point	266°F (130°C)	at 73°F (23°C) and 50% R.H.

Water Absorption	0.07%	ASTM C 413 at 73°F (23°C) and 50% R.H
Chemical Resistance	Please consult Sikafloor Technical Services.	
Microbiological Resistance	Resistance to Fungi Growth Rated 0 (no growth)	ASTM G21 at 73°F (23°C) and 50% R.H
	Resistance to Mold Growth Rated 10 (highest resistance)	ASTM D3273 at 73°F (23°C) and 50% R.H

APPLICATION INFORMATION

Mixing Ratio

Components A : B : C = Mix full units only

Coverage

Approx. 168 ft2 (15.6 m2) per unit at 20 mils (0.5.mm)
Approx. 244 ft2 (20.8 m2) per unit at 15 mils(0.4 mm)
(The above figures do not allow for surface porosity, profile or waste).

Ambient Air Temperature

Minimum/Maximum 40˚/85˚F (4˚/30˚C).

Substrate Temperature

Minimum/Maximum 40˚/85˚F (4˚/30˚C).

Pot Life

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

Cure Time

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

Before applying Sikafloor®-31 NA PurCem® when a scratch primer and sealer coat is used allow:

Ambient & 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

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.

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° to 75°F (18° to 24°C).
IMPORTANT: Product must be protected from freezing. If frozen, discard in a responsible manner in accordance with local, state and federal law.

Ambient Temperature: Minimum/Maximum 40˚/85˚F (4˚/30˚C).
Substrate Temperature: Minimum/Maximum 40˚/85˚F (4˚/30˚C). Substrate temperature must be at least 5˚F (3˚C) above measured Dew Point.
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%.

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. Under no circumstance 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-31NA PurCem as a coating
- Do not apply while ambient and substrate temperatures are rising, as pinholes may occur.
- 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. This product is not designed for negative side waterproofing.
- For professional use only by experienced applicators

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.

SURFACE PREPARATION

Surface Preparation should be clean and sound. Remove all dust, dirt, existing paint films, efflorescence, exudates, laitance, forms 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 3-6. The compressive strength of the concrete substrate should be at least 3,625 psi (25 MPa) and a minimum of 218 psi (1.5 MPa) in tension 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.

Edge Terminations
All free edges of a Sikafloor PurCem floor, whether at the perimeter, along gutters or at drains require extra anchorage to distribute mechanical and thermal stresses. This is best achieved by forming or cutting grooves in the concrete. Grooves should have a depth and width of 2 times the thickness of the Sikafloor PurCem floor. Contact Sikafloor Technical Service for more information and construction details.
If necessary, protect all free edges with mechanically attached metal strips. Do not featheredge, always turn into an anchor groove.

Expansion Joints
Expansion joints should be provided in the substrates at the intersection of dissimilar materials. Isolate areas subject to thermal stresses, vibration movements or around load-bearing columns and at vessel sealing rings. Refer to details provided at https://usa.sika.com/flooring.

Priming
Please refer to the individual Product Data Sheet for each component.

MIXING

Mix Ratio: Components A : B : C = Mix full units only
Mixing will be affected by temperature; condition materials for use to 65 - 75º F (18 - 24º 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-31NA 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 (0.4-0.5 mm) using a 3/8" nap roller, lightly broadcast with selected mineral aggregates (selected for texture) and back roll to encapsulate the aggregate.

Slip-resistant broadcast coating
Apply a body coat of Sikafloor-31NA PurCem at a thickness of 15-20 mils (0.4-0.5 mm), 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.

OTHER RESTRICTIONS

See Legal Disclaimer.

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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