

PRODUCT DATA SHEET

Sikafloor®-422

TWO COMPONENT WATER BASED URETHAN COATING

PRODUCT DESCRIPTION

A water-based, high solids, two-component urethane with excellent abrasion and adhesion properties.

USES

Sikafloor®-422 may only be used by experienced professionals.

For use as a topcoat over epoxy floor or wall base coats. Water based formulation allows for use in areas where conventional solvent based systems cannot be used.

CHARACTERISTICS / ADVANTAGES

- Water based low odor
- Good UV stability
- Excellent abrasion resistance
- Good chemical resistance
- High light reflectance
- High gloss, stippled finish

PRODUCT INFORMATION

Packaging	Component A: 2.8 US gal. (7.6 L) Component B: 1 US gal. (3.9 L) Components A+B: 3.8 US gal. (11.4 L) (Ready to mix unit)
Appearance / Color	Clear or field pigmented with Sikafloor Urethane Color Additive 1 quart (1 L) size. Is required per 3.8 gal. (14.3 L).
Shelf Life	6 month in unopened container
Storage Conditions	Store dry between 40 °F and 90 °F (4–32 °C).
Solid content by mass	60 % ± 1.0
Volatile organic compound (VOC) content	27 g/l A+B Combined

TECHNICAL INFORMATION

Abrasion Resistance	CS-17 wheel, 1000 cycles, 1000 22–25 mg loss	ASTM D4060 73 °F (23 °C) 50 % R.H
Tensile Adhesion Strength	> 400 psi (2.76 MPa) (100 % concrete failure)	ASTM D4541 73 °F (23 °C) 50 % R.H.
Chemical Resistance	Please consult Sikafloor Technical Services.	

APPLICATION INFORMATION

Coverage 320–533 ft²/ US gal (7.9–13.1 m²/ L) at 3.0–5.0 mils/ coat (0.075 –0.125 mm) wet film thickness (w.f.t.). Recommended 2 coats over a primed surface.

Pot Life	Material Temperature	Time
	50 °F (23 °C)	~ 50 minutes
	68 °F (20 °C)	~ 35 minutes
	86 °F (30 °C)	~ 25 minutes

Do not apply after indicated Pot Life is exceeded. End of Pot Life is not visible.

Cure Time	Ambient & Substrate Temperature	Foot Traffic	Light Traffic	Full Cure
	50 °F (10 °C)	~ 24 hours	~ 3 days	~ 10 days
	68 °F (20 °C)	~ 12 hours	~ 2 days	~ 7 days
	86 °F (30 °C)	~ 10 hours	~ 1 days	~ 4 days

Applied Product Ready for Use

Before applying second coat of Sikafloor®-422 allow:

Ambient & Substrate Temperature	Minimum	Maximum
50 °F (10 °C)	24 hours	24 hours
68 °F (20 °C)	8 hours	24 hours
86 °F (30 °C)	6 hours	24 hours

* If the recoat window exceeded, the floor surface should be screened using 80–100 grit, to the effect that the gloss is removed before applying the next coat.

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

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.).

Substrate Moisture Content: Moisture content of concrete substrate must be ≤ 4 % by mass (pbw – part by weight) as measured with a Tramex® CME/CMExpert type concrete moisture meter on mechanically prepared surface according to this product data sheet (preparation to CSP-3 to CSP-4 as per ICRI guidelines). Do not apply to concrete substrate with moisture levels > 4 % mass (pbw – part by weight) as measured with Tramex® CME/CMExpert type concrete moisture meter. If moisture content of concrete substrate is > 4 % by mass (pbw – part by weight) as measured with Tramex® CME/CMExpert type concrete moisture meter, use Sikafloor® 1610 or Sikafloor® 22NA PurCem. When relative humidity tests for concrete substrate are conducted per ASTM F2170 for project specific requirements, values must be ≤ 85 %. If values are > 85% according to ASTM F2170 use Sikafloor® 1610 or Sikafloor 22NA PurCem. ASTM F2170 testing is not a substitute for measuring substrate moisture content. Use a Tramex® CME/CMExpert type concrete moisture meter as described above.

Material Temperature: Precondition material for at least 24 hours between 65 °F and 75 °F (18–24 °C)

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. 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 75 % (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.

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. Use of thinners will void any applicable Sika warranty.

Application: Apply the coating to the prepared substrate which should be pore-free and pinhole-free. If necessary, apply an additional coat of a suitable material to ensure the substrate is pore free and pinhole-free and provides uniform and complete coverage over the entire substrate.

- 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 h.
- Do not exceed 6 wet mils when applying this product. Foaming of the film will occur during cure.
- 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.
- Typically not recommended for exterior slabs on grade where freeze/thaw conditions may exist.
- Use of unvented heaters and certain heat sources may

result in defects (e.g. blushing, whitening, debonding, etc.).

- Beware of air flow and changes in air flow.
- Introduction of dust, debris, and particles, etc. may result in surface imperfections and other defects.
- 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.

APPLICATION INSTRUCTIONS

SURFACE PREPARATION

Surface must be clean, sound and dry. Remove dust, laitance, grease, curing compounds, bond inhibiting impregnations, waxes and any other contaminants. All projections, rough spots, etc. should be dressed off to achieve a level surface prior to the application.

Concrete - Should be cleaned and prepared to achieve a laitance-free and contaminant-free, open textured surface by shot blasting or equivalent mechanical means (CSP-3 to CSP-4 as per ICRI guidelines). Sweep and vacuum any remaining dirt and dust with a wet/dry vacuum. Removing residual dust will help ensure a tenacious bond between the primer and substrate.

Whenever “shot-blasting” is utilized, be careful to leave concrete with a uniform texture. “Overblasting” will result in reduced coverage rates of the primer and/or subsequent topcoats. The “shotblast” pattern may show through the last coat, known as “tracking”. The compressive strength of the concrete substrate should be at least 3,500 psi (24 MPa) at 28 days and at least 215 psi (1.5 MPa) in tension at the time of application. For other substrates, please contact Sikafloor Technical Services.

Priming

Priming for concrete substrate is required. Prime with either Sikafloor® 160, Sikafloor® 161 or Sikafloor® 1610. Allow the primer to cure (varies with temperature and humidity) until tack free before applying subsequent coats. Ensure that the primer is pore-free, pinhole-free and provides uniform and complete coverage over the entire substrate. Please refer to the individual most current and respective Product Data Sheet for specific and detailed information.

Product Data Sheet

Sikafloor®-422

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MIXING

Mix full units only

Clear Resin: Premix each Component separately. Empty Component B (Hardener) in the correct mix ratio into Component A (Resin). Mix the combined components for at least 3 minutes using a low speed drill (300–450 rpm) and Exomixer or Jiffy type paddle suited to the volume of the mixing container to minimize entrapped air. Be careful not to introduce any air bubbles while mixing. Make sure the contents are completely mixed to avoid any weak or partially cured spots in the coating. During the mixing operation, scrape down the sides and bottom of the container with a flat or straight edge trowel at least once to ensure complete mixing.

Field Pigmented: If color is desired, the appropriate Sikafloor Polyurethane Color Additive is added to Component A at a rate of 1 quart per 3.8 mixed gal. (i.e. Components A+B). Mix Component A and Sikafloor Polyurethane Color Additive for 2 minutes or until a uniform color is achieved with a low speed drill (300–450 rpm) and Exomixer or Jiffy type paddle suited to the volume. Empty Component B (Hardener) in the correct mix ratio to Component A (Resin) and mix for additional 2 minutes. Be careful not to introduce any air bubbles while mixing. Make sure the contents are completely mixed to avoid any weak or partially cured spots in the coating. 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.

Do not mix more material than can be applied within the working time limits (i.e. Pot Life) at the actual field temperature

APPLICATION

Pour a thin bead (approximately 6–12 in. wide) of Sikafloor®-422 on the surface, use a flat squeegee to distribute the material evenly and back roll. Back roll the Sikafloor®-422 only to level the thickness of material applied. Do not apply in excess of 6 mils (0.15 mm) WFT, failure of the coating may occur. Divide the floor into sections (at expansion joints or doorways when possible) that can be completed without stopping. Where a section will end, it should be taped off to form a straight line providing a clean edge for an adjacent section. Back rolling is typically done with an 18 in. (455 mm) wide short nap, 3/8 in. (10 mm), solvent-resistant roller cover. Over-rolling and late back rolling may cause bubbling and leave roller marks.

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.

SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within the product's shelf life. User determines suitability of product for intended use and assumes all risks. User's and/or buyer's sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs. **NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.**

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