

Product Data Sheet
Edition 4.26.2013
Sikafloor® 422

Sikafloor® 422

Two component water based urethane coating

Description	A water-based, high solids, two-component urethane with excellent abrasion and adhesion properties.
Where to Use	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.
Advantages	<ul style="list-style-type: none"> ■ Water based — low odor ■ Good UV stability ■ Excellent abrasion resistance ■ Good chemical resistance ■ High light reflectance ■ High gloss, stippled finish

TYPICAL 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.

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)			
Color	Clear or field pigmented with Sikafloor Urethane Color Additive 1 quart (1.0 L) size. Is required per 3.8 gallon.			
Coverage	320 - 533 ft ² / US gal (7.9 - 13.1 m ² / 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 (10°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.			
Waiting / Recoat Times	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.			
Cure Times	Ambient & Substrate Temperature	Foot traffic	Light traffic	Full cure
	+50°F (10°C)	~ 24 hours	~ 5 days	~ 10 days
	+68°F (20°C)	~ 12 hours	~ 3 days	~ 7 days
	+86°F (30°C)	~ 10 hours	~ 2 days	~ 5 days

Properties Tested at 73°F (23°C) and 50 % R.H:

Pull-off Strength	ASTM D4541	> 400 psi (2.76 MPa) (100% concrete failure)
Abrasion Resistance by Taber Abraser (CS-17 wheel, 1000 cycles, 1000 gm load)	ASTM D4060	22-25 mg loss
VOC Content	ASTM D2369	68 g/l
Solids by weight	60% ± 1.0	
Flash Point, T.C.C.	150°F (65°C)	
Flexibility	Bent on 1/8" conical mandrel	No cracking or crazing
Chemical Resistance	Please consult Sikafloor Technical Services.	
Shelf Life	6 month in unopened container, Store dry between 40° - 90°F (4° - 32°C).	

Industrial Flooring



Industrial Flooring

How to Use Surface Preparation	<p>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. “Over-blasting” 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.</p>
Priming	<p>Priming for concrete substrate is required. Prime with either Sikafloor 107, 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.</p> <p>Please refer to the individual most current and respective Product Data Sheet for specific and detailed information.</p>
Mixing	<p>Mix full units only</p> <p>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.</p> <p>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 gallons (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.</p> <p>Do not mix more material than can be applied within the working time limits (i.e. Pot Life) at the actual field temperature</p>
Application	<p>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 118 inch (455 mm) wide short nap, 3/8 inch (10 mm), solvent-resistant roller cover. Over-rolling and late back rolling may cause bubbling and leave roller marks.</p>
Limitations	<p>Notes on Limitations:</p> <p>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.).</p> <p>Substrate Moisture Content: Moisture content of concrete substrate must be $\leq 4\%$ 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 81 EpoCem.</p> <p>When relative humidity tests for concrete substrate are conducted per ASTM F2170 for project specific requirements, values must be $\leq 85\%$. If values are $> 85\%$ according to ASTM F2170 use Sikafloor 1610 or Sikafloor 81 EpoCem.</p>



Industrial Flooring

ASTM F2170 testing is **not** a substitute for measuring substrate moisture content with a Tramex® CME/CMExpert type concrete moisture meter as described above.

Material Temperature: Precondition material for at least 24 hours between 65° to 75°F (18° to 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 attempted at Material, Ambient and/or Substrate Temperature conditions less than 65°F (18°C) will result in a decrease in product workability and slower cure rates.

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 72 hrs.
- 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.

Caution

COMPONENT A: CAUTION: IRRITANT. Contains Dipropylene Diglycol Dimethyl Ether (CAS: 1111109-77-4), Propylene Glycol Mono Propyl Ether (CAS: 1569-01-3), N- Butyl Alcohol (CAS: 71-36-3). May cause eye/skin/respiratory irritation. May be harmful if swallowed. Reports have associated repeated and prolonged exposure to some of the chemicals in this product with permanent brain, liver, kidney and nervous system damage

COMPONENT B: WARNING: IRRITANT, SENSITIZER. Contains Homopolymer of 1, 6 Hexamethylene Diisocyanate (CAS: 28182-81-2). May cause eye/skin/respiratory irritation. May cause skin and respiratory sensitization. May be harmful if swallowed. **Deliberate concentration of vapors 'A' &/ or 'B' components for purposes of inhalation is harmful and can be fatal.**

First Aid

Eyes – Hold eyelids apart and flush thoroughly with water for 15 minutes. **Skin** – Remove contaminated clothing. Wash skin thoroughly for 15 minutes with soap and water. **Inhalation** – Remove to fresh air. **Ingestion** – Do not induce vomiting. Dilute with water. **Contact physician. In all cases contact a physician immediately if symptoms persist.**



Sika®

Industrial Flooring

Handling and Storage	Wear protective equipment (gloves/safety glasses/clothing) to prevent contact with skin and eyes. Keep container closed in a cool dry place. Wash skin thoroughly with soap and water after use. Use with adequate, general and local, exhaust ventilation. In absence of adequate ventilation, use a properly fitted NIOSH respirator. Remove contaminated clothing. Launder before reuse.
Clean Up	Avoid direct contact with eyes and skin. Wearing chemical resistant goggles/gloves/clothing, collect spill. Ventilate area. In absence of adequate ventilation, use properly fitted NIOSH respirator. Sweep up spill and place in closed container. Dispose of in accordance with applicable local, state and federal environmental regulations.

KEEP CONTAINER TIGHTLY CLOSED • KEEP OUT OF REACH OF CHILDREN • NOT FOR INTERNAL CONSUMPTION • FOR INDUSTRIAL USE ONLY

All information provided by Sika Corporation ("Sika") concerning Sika products, including but not limited to, any recommendations and advice relating to the application and use of Sika products, is given in good faith based on Sika's current experience and knowledge of its products when properly stored, handled and applied under normal conditions in accordance with Sika's instructions. In practice, the differences in materials, substrates, storage and handling conditions, actual site conditions and other factors outside of Sika's control are such that Sika assumes no liability for the provision of such information, advice, recommendations or instructions related to its products, nor shall any legal relationship be created by or arise from the provision of such information, advice, recommendations or instructions related to its products. The user of the Sika product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with the full application of the product(s). Sika reserves the right to change the properties of its products without notice. All sales of Sika product(s) are subject to its current terms and conditions of sale which are available at www.sika.com or by calling 800-933-7452.

Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's most current Product Data Sheet, product label and Material Safety Data Sheet which are available online at www.sikausa.com or by calling Sika's Technical Service Department at 800-933-7452. Nothing contained in any Sika materials relieves the user of the obligation to read and follow the warnings and instruction for each Sika product as set forth in the current Product Data Sheet, product label and Material Safety Data Sheet prior to product use.

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 shelf life. User determines suitability of product for intended use and assumes all risks. Buyer's sole remedy shall be limited to the purchase price or replacement of product exclusive of labor or cost of labor. **NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKASHALL NOT BELIEABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKASHALL 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.**

Visit our website at www.sikausa.com

1-800-933-SIKA NATIONWIDE

Regional Information and Sales Centers. For the location of your nearest Sika sales office, contact your regional center.

Sika Corporation
201 Polito Avenue
Lyndhurst, NJ 07071
Phone: 800-933-7452
Fax: 201-933-6225

Sika Canada Inc.
601 Delmar Avenue
Pointe Claire
Quebec H9R 4A9
Phone: 514-697-2610
Fax: 514-694-2792

Sika Mexicana S.A. de C.V.
Carretera Libre Celaya Km. 8.5
Fracc. Industrial Balvanera
Corregidora, Queretaro
C.P. 76920
Phone: 52 442 2385800
Fax: 52 442 2250537

