

Sikafloor® 315

Abrasion Resistant Aliphatic Polyurethane Low - VOC

Description	Sikafloor 315 is a high solids, low VOC abrasion resistant, aliphatic polyurethane coating. It can be applied as a three part clear, or four part pigmented coating. Wear additive is included for increased abrasion resistance.
Where to Use	Sikafloor 315 provides excellent adhesion and wear resistant properties to epoxy primed concrete substrates. It displays excellent UV resistance and chemical resistance. Sikafloor 315 includes wear aggregate which includes abrasion resistance and is typically used in light to heavy traffic areas.
Advantages	<ul style="list-style-type: none"> ■ Superior abrasion resistance ■ High impact resistance ■ Excellent UV resistance

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: 0.34 US gal. (1.3L) Catalyst Component B: 2.00 US gal. (7.6 L) Isocyanate Components A+B: 2.34 US gal. (8.9 L) Component C: Wear Aggregate: 0.5 US gal. (1.9 L) (7 lb/can 3.17 kg/can)			
Color	Clear or pigmented with Sikafloor Polyurethane Color Additive; 1 quart (0.95 L) size per 2.34 US gallon mix.			
Coverage	Coverage of materials on a primed or prepared substrate will vary depending on the porosity or density, profile and texture of the substrate. Sikafloor 315 is applied at 3 - 3.5 wet mils. The dry film thickness is 2.7 - 3.1 mils. The theoretical coverages are: Pigmented Sikafloor 315 with Wear Additive: 3.09 gallon mix = 1,400 ft ² (458 ft ² /gal) at 3.5 wet mils Unpigmented Sikafloor 315 with Wear Additive: 2.84 gallon mix = 1,300 ft ² (458 ft ² /gal) at 3.5 wet mils (The above figures do not allow for surface profile or wastage)			
Pot Life	Material Temperature	Time		
	+50°F (10°C)	~ 50 minutes		
	+68°F (20°C)	~ 25 minutes		
	+86°F (30°C)	~ 15 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 315 allow:			
	Ambient & Substrate Temperature	Minimum	Maximum	
	+50°F (10°C)	24 hours	3 days	
	+68°F (20°C)	8 hours	2 days	
	+86°F (30°C)	6 hours	1 day	
Cure Times	Ambient & 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
Properties Tested at 73°F (23°C) and 50 % R.H:				
Tensile Strength		ASTM D2370	2,882 psi.	
Pull-off Strength - Primed Concrete		ASTM D4541	> 400 psi (2.76 MPa) (100% concrete failure)	
Elongation			2.29	
Abrasion Resistance (CS-17 Wheel, 1000 gm load, 1000 cycles)		ASTM D4060	0.01 - 0.02 grams	
Coefficient Of Friction		ASTM 2047	0.6 - 0.7	
VOC Content		ASTM D2369 With Wear Aggregate	≤ 100 g/L	
		ASTM D2369 With Sikafloor Urethane Color Add Only	≤ 50 g/L	
Hardness		ASTM D 3363 Pencil	2H to 3H	
Slip Resistance		Equivalent to ASTM D2047	Passes	
Chemical Resistance		Please consult Sikafloor Technical Services.		
Shelf Life		2 years in unopened container, Store dry between 40° - 90°F (4° - 32°C)		



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**How to Use
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. "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.

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.

Mixing

Mix Ratio: Mix full units only

Clear Resin:

Empty the entire contents of the Component B (Isocyanate) into a clean bucket/container large enough to accommodate the mix size quantity. Using a Jiffy Blade and drill, add the the Component A (Catalyst) to the Component B (Isocyanate) under agitation. Mix at low speed for 1 minute (300 - 450 rpm). Next, slowly add the wear additive aggregate to the material under agitation, mix for 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 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:

Premix each component separately. If color is desired, the appropriate Sikafloor Urethane Color Additive is added to Component B (Isocyanate) at a rate of 1 quart per 2.34 mixed gallons (i.e. Components A+B). Mix Component B (Isocyanate) 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 A (Catalyst) in the correct mix ratio to Component B (Isocyanate) 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 operation, 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

Application of Sikafloor 315 using a Roller:

Sikafloor 315 is applied with an 18 inch (454 mm) wide short nap roller, 3/8-inch (10 mm), solvent-resistant roller cover at a thickness of 3 – 3.5 mils (0.075 mm).

The floor area to be coated should be divided into sections that can be done completely in one application sequence. Sections should be divided at expansion joints or doorways when possible. The end of a section should be taped off to form a straight clean edge for an adjacent section. Pour the material in a roller tray and saturate the roller, remove the excess material by lightly rolling it in the tray. Apply 3 pairs of 8 - 10 foot long paths on to the floor. Spread the material with roller passes perpendicular to the originally applied paths. This material may be aggressively rolled to even out the application. It is extremely important to apply the coating at a rate of 3 - 3.5 mils to achieve proper appearance, texture, and color stability. If material is applied too heavy, the coating may blister, if too thin, the coating will appear very flat in sheen. It is also very important to remix the material often with the roller in the tray to keep the aggregate from settling. Cross roll the entire area with straight uninterrupted passes across the entire width of the floor. This will reduce roller marks. If appearance is still not uniform after a few of these passes, repeat this procedure.



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Application of Sikafloor 315 using a Flat Squeegee:

Pour a thin ribbon, approximately 6”- 8” wide of Sikafloor 315 onto the floor surface. Using a flat squeegee spread the material at the manufacturers recommended rate. Avoid leaving puddles of the Sikafloor 315 on the floor surface. Using a 3/8” nap roller, back roll the material in the opposite direction that it was squeegee applied. Continue to back roll the material to achieve even coverage across the floor. The Sikafloor 315 can be rolled aggressively to remove any color shading. It is extremely important to apply this material at a rate of 3 – 3.5 mils (WFT). To finish, the Sikafloor 315 should be cross rolled; uninterrupted across the entire width of the floor. This will help reduce roller marks. It is important to remix the remaining material in the bucket before a fresh ribbon of material is poured onto the floor. This will ensure that the Wear Additive is evenly dispersed in the Sikafloor 315.

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 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 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.
- 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.
- 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.

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Industrial Flooring

The Sika logo consists of the word "Sika" in a bold, yellow, sans-serif font, set against a red triangular background. A registered trademark symbol (®) is located to the right of the text.

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