

**Product Data Sheet**

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Sikafloor® 216

# Sikafloor® 216

## Versatile High Gloss Epoxy Resin used as a Primer, High Build Coating and for Decorative Quartz and Flake Applications

**Description** Sikafloor 216 is a low odor, 100% solids, epoxy resin coating system primarily designed for high build coatings, decorative quartz and decorative flake applications. Sikafloor 216 may be used as a primer and may be applied clear or pigmented using Sikafloor Epoxy Color Additives.

**Where to Use** Sikafloor 216 is ideal as a broadcast clear, low odor top coat or intermediate coat over decorative quartz or vinyl flake floor broadcast systems. Sikafloor 216 is also a field pigmentable product. Sikafloor 216 clear and/or pigmented can also be top coated with an aliphatic urethane when increased chemical and abrasion resistance are required. When used as a primer, Sikafloor 216 can be considered where  $\leq 4\%$  moisture content by mass (pbw – part by weight) is measured on concrete substrate with Tramex® CME/CMEExpert type concrete moisture meter.

Typical applications would include:

- Auto dealerships
- Institutions
- Grocery, department and retail stores
- Pharmaceutical laboratories, production rooms and offices.
- Museum and galleries.
- Animal shelter and veterinary clinics.
- Laboratories, Bathroom/Shower areas

**Advantages**

- Good chemical and mechanical resistance
- 100% solids as supplied
- Attractive, high gloss, reflective coating
- Tough, smooth, non-porous surface is easy to clean
- Durable, impermeable and seamless
- Easily applied with brush, roller or squeegee
- Good Abrasion Resistance
- Optional integral cove base and curbs can be installed without seams and joints
- Excellent Impact Resistance
- Unlimited design capabilities available in various textures, patterns and colors

**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.

<b>Packaging</b>	Component A: 3.0 US gal. (11.35 L)	Component A: 50 US gal. (189 L) (2 units needed)
	Component B: 1.5 US gal. (5.7 L)	Component B: 50 US gal. (189 L)
	Components A+B: 4.5 US gal. (17 L)	Components A+B: 150 US gal. (568 L)
	(Ready to mix unit)	
<b>Color</b>	Clear or field pigmented with Sikafloor Epoxy Color Additive	
<b>Coverage</b>	<b>Smooth Finish Coating:</b>	
	<b>Prime coat:</b>	
	160 - 200 ft <sup>2</sup> / US gal (3.9 – 4.9 m <sup>2</sup> / L) at 8 - 10 mils (0.20 – 0.25 mm) wet film thickness (w.f.t.)	
<b>Pot Life</b>	<b>Wear coat:</b>	
	100 - 133 ft <sup>2</sup> / US gal (2.6 - 3.3 m <sup>2</sup> / L) at 12 - 16 mils (0.30 – 0.40 mm) wet film thickness (w.f.t.)	
	<b>Material Temperature</b>	<b>Time</b>
	+50°F (10°C)	~ 50 minutes
	+68°F (20°C)	~ 25 minutes
	+86°F (30°C)	~ 15 minutes

# Industrial Flooring



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<b>Waiting / Recoat Times</b>				
Before applying second coat of Sikafloor 216 allow:				
<b>Ambient &amp; Substrate Temperature</b>		<b>Minimum</b>	<b>Maximum</b>	
+50°F (10°C)		24 hours	3 days	
+68°F (20°C)		8 hours	2 days	
+86°F (30°C)		6 hours	1 day	
Before applying Sikafloor Epoxy or Polyurethane on Sikafloor 216 allow:				
<b>Ambient &amp; Substrate Temperature</b>		<b>Minimum</b>	<b>Maximum</b>	
+50°F (10°C)		24 hours	3 days	
+68°F (20°C)		8 hours	2 days	
+86°F (30°C)		6 hours	1 day	
<b>Cure Times</b>	<b>Ambient &amp; Substrate Temperature</b>	<b>Foot traffic</b>	<b>Light traffic</b>	<b>Full cure</b>
	+50°F (10°C)	~ 24 hours	~ 6 days	~ 10 days
	+68°F (20°C)	~ 8 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:**

<b>Solid Content</b>	~ 100% (by volume) / ~ 100% (by weight)			
<b>Compressive Strength</b>	ASTM C579	Resin (filled 1:0,9 with F34): 7,250 psi (50 N/mm <sup>2</sup> ) (28 days)		
<b>Flexural Strength</b>	ASTM C580	Resin (filled 1:0,9 with F34): 2,900 psi (20 N/mm <sup>2</sup> ) (28 days)		
<b>Pull-off Strength</b>	ASTM D4541	> 400 psi (2.7 MPa) (100% concrete failure)		
<b>Viscosity (mixed)</b>	Components A + B:	292 (SP1/100)		
<b>Shore D Hardness (7 days)</b>	ASTM D2240	78 - 82		
<b>VOC Content</b>	ASTM D2369	≤ 50 g/L		
<b>Chemical Resistance</b>	Please consult Sikafloor Technical Services.			
<b>Shelf Life</b>	2 years in original unopened container under proper storage conditions, Store dry between 40° - 90°F (4° - 32°C).			

**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/coating and the 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.

**Mixing**

**Mixing Ratio - 2 : 1 by volume.**

For bulk packaging, when not mixing full units, each component must be pre-mixed separately to ensure product uniformity.

**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:**

Premix each component separately. If color is desired, the appropriate Sikafloor Epoxy Color Additive is added to Component A at a rate of 1 quart (1L) per 4.5 mixed gallons (17 L) [(i.e. Components A+B)] for all colors except bright colors like White, Safety Yellow or Tile Red which require 2 quarts (2 L) per 4.5 mixed gallons (17 L) [(i.e. Components A+B)]. Mix Component A and Sikafloor Epoxy 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 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.**



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**Application****As Primer:**

Apply Sikafloor 216 by squeegee at the rate of 160 - 200 ft<sup>2</sup> / US gal (3.9 – 4.9 m<sup>2</sup> / L) at 8 - 10 mils (0.20 – 0.25 mm) wet film thickness (w.f.t.) and back roll with pressure after 15 minutes. Coverage will vary depending on the porosity of the prepared floor. Product has a limited Pot Life, see Typical Data. Do not apply by dipping roller into mixing container. Pour a bead of product in the form of a ribbon on the surface to be coated, then spread with squeegee and back roll. Ensure that the coating is pore-free and pinhole-free and provides uniform and complete coverage over the entire concrete substrate. If necessary, apply an additional coat to ensure the coating is pore-free and pinhole-free and provides uniform and complete coverage over the entire concrete substrate.

**As Sealer/Intermediate:**

Sikafloor 216 is applied with a 12 to 40 mil (0.30 - 1 mm) notched squeegee over a smooth surface and a flat squeegee over a rough decorative quartz or decorative flake surfaces. Back rolling is typically done with an 18 inch (455 mm) wide 3/8 inch (10 mm) short nap, solvent-resistant roller cover. Back roll the Sikafloor 216 only to level the squeegee applied material. Over-rolling and late back rolling may cause bubbling and leave roller marks.

**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<sup>®</sup> 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<sup>®</sup> CME/CMExpert type concrete moisture meter. If moisture content of concrete substrate is > 4% by mass (pbw – part by weight) as measured with Tramex<sup>®</sup> CME/CMExpert type concrete moisture meter, use Sikafloor 1610 or Sikafloor 81 EpoCem.

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 81 EpoCem.

ASTM F2170 testing is not a substitute for measuring substrate moisture content with a Tramex<sup>®</sup> 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.

**Ambient Relative Humidity:** Maximum ambient and 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.

**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.

Improper mixing procedure or incorrect mixing ratio may result in moisture sensitivity, whitening, slow cure, soft spots, and other defects.

**Application:** If used as a primer. Apply the primer/coating to the prepared substrate using a squeegee and back roll to provide uniform coverage. Ensure that the substrate is pore-free and pinhole-free and provides uniform and complete coverage over the entire concrete substrate. If necessary, apply an additional coat 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.
- 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



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- 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.

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

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

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 Safety Data Sheet which are available online at <http://usa.sika.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 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. 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. SALE OF SIKA PRODUCTS ARE SUBJECT SIKA'S TERMS AND CONDITIONS OF SALE AVAILABLE AT [HTTP://USA.SIKA.COM/](http://usa.sika.com/) OR BY CALLING 201-933-8800.

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