

## PRODUCT DATA SHEET

# Sikafloor®-510

### Abrasion and UV Resistant Polyaspartic Resin System

#### PRODUCT DESCRIPTION

Sikafloor®-510 is a clear two-component, solvent-free, high solids, low-viscosity, high strength, polyaspartic resin system. Sikafloor®-510 is designed to be installed as a clear topcoat over a quartz or flake broadcast system where a low VOC, quick cure, flexible, UV resistance finish coat is necessary. Sikafloor®-510 is available in clear or with Sikafloor® Urethane Color Additive to achieve a variety of colors.

#### USES

Sikafloor®-510 may only be used by experienced professionals.

Typically used in decorative applications, chemical storage areas, warehouses, washrooms, laboratories, food preparation areas and chemical process plants.

#### CHARACTERISTICS / ADVANTAGES

- Resists a very wide range of organic and inorganic acids, alkalis, amines, salts and solvents. Refer to Sikafloor chemical resistance guide.
- Cures quickly, fast turnaround
- Durable, impermeable and seamless
- Superior mechanical resistance.
- Excellent chemical resistance
- Superior aesthetic finish.
- Excellent UV resistance
- Low maintenance.
- Does not support growth of bacteria or fungus.
- High density prevents dirt penetration, which provides easy cleaning.
- Solvent-free.
- Meets USDA requirements for incidental food contact

#### PRODUCT INFORMATION

<b>Packaging</b>	Component A: 5 US gal. (18.9 L) Component B: 3.33 US gal. (12.6 L) Components A+B: 8.33 gal. (31.5 L)
<b>Appearance / Color</b>	Clear or pigmented only with Sikafloor® SCO Color Additive; 1 quart (1.0 L) size
<b>Shelf Life</b>	Components A+B: 12 months in original unopened packaging
<b>Storage Conditions</b>	Store dry between 50–77 °F (10–25 °C). Protect from freezing
<b>Volatile organic compound (VOC) content</b>	16 g/l 17 g/l with Sikafloor®-372 Urethane Accelerator 17 g/l

#### TECHNICAL INFORMATION

Shore D Hardness	75	(ASTM D-2240)
Tensile Strength	6,500 psi	(ASTM C-307)
Elongation at Break	10 %	(ASTM D-638)
Tensile Adhesion Strength	> 400 psi (2.7 MPa) (100 % concrete failure)	(ASTM D-1583)
Chemical Resistance	Please consult Sikafloor® Technical Services.	

## APPLICATION INFORMATION

Mixing Ratio	A : B = 78 : 22			
Coverage	<b>Smooth Finish Coating:</b>			
	Prime coat: 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.)			
	Wear coat: 105–135 ft <sup>2</sup> / US gal (2.6–3.3 m <sup>2</sup> / L) at 12–15 mils (0.30–0.38 mm) wet film thickness (w.f.t.)			
Ambient Air Temperature	40 °F (4 °C) and 85 °F (30 °C) maximum			
Pot Life	<b>Material temperature</b>	<b>Time*</b>		
	50 °F (23 °C)	~ 20 minutes		
	68 °F (20 °C)	~ 15 minutes		
	86 °F (30 °C)	~ 10 minutes		
	* Pot Life is based on clear resin			
Cure Time	<b>Ambient &amp; Substrate Temperature</b>	<b>Foot traffic</b>	<b>Light traffic</b>	<b>Full cure</b>
	68 °F (20 °C)	~ 4 hours	~ 8 hours	~ 5 days
Waiting / Recoat Times	Before applying second coat of Sikafloor 510 allow:			
	<b>Ambient &amp; Substrate Temperature</b>	<b>Minimum</b>	<b>Maximum</b>	
	68 °F (20 °C)	90 minutes	24 hours	

## 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 removed 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. When using Sikafloor® 510 as primer extra precaution has to be taken on the substrate

preparation and on the moisture content.

## MIXING

### Mixing Ratio - 3 : 2 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:

If color is desired, Sikafloor® SCO Additive is added to Component A at a rate of 1 quart per 2.5 mixed gallons (i.e. Components A+B) for all colors. Mix Component A and Sikafloor® Urethane 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.

## APPLICATION

### As a pigmented topcoat/sealer coat for smooth or broadcast finish:

Squeegee and back roll Sikafloor®-510 to provide a uniform coverage without ponding at a thickness of 10–15 mils (160–107 ft<sup>2</sup>/gal). If required, repeat this procedure for a second coat.

### As a clear topcoat for a broadcast quartz or flake system:

Squeegee and back roll Sikafloor®-510 to provide a uniform coverage without ponding at a thickness of 10–15 mils (160–107 ft<sup>2</sup>/gal). If required, repeat this procedure for a second coat. As a stand-alone double broadcast quick cure decorative quartz and flake system:

**Step 1:** Primer - Apply a neat coat of Sikafloor®-510 on a prepared substrate as a primer using a squeegee and roller without ponding at 5–10 mils (160–320 ft<sup>2</sup>/gal). Note: When using Sikafloor®-510 as primer extra precaution has to be taken on the substrate preparation

and moisture content.

**Step 2:** First Broadcast Application - Squeegee and back roll Sikafloor®-510 to provide a uniform coverage without ponding at a thickness of 10–15 mils (160–107 ft<sup>2</sup>/gal). Broadcast pre-blended decorative flakes or colored quartz aggregates into the binder to saturation. Broadcast in a manner so that the flakes or colored quartz aggregates fall vertically into the binder. Broadcast to rejection. Ensure that broadcast flakes/aggregates cover entire surface. Allow broadcast system to cure sufficiently to be able to resist foot traffic without damaging the surface. Remove excess flakes/aggregates from the surface. Removal of excess flakes/aggregates is carried out by sweeping up the flakes/aggregates, followed by vacuuming, until surface is free of all loose particles and dust.

**Step 3:** Second Broadcast Application - Squeegee and back roll Sikafloor®-510 to provide a uniform coverage without ponding at a thickness of 10–15 mils (160–107 ft<sup>2</sup>/gal). Broadcast pre-blended decorative flakes or colored quartz aggregates into the binder to saturation. Broadcast in a manner so that aggregates fall vertically into the binder. Broadcast to rejection. Ensure that broadcast flakes/aggregates cover entire surface. Allow broadcast system to cure sufficiently to be able to resist foot traffic without damaging the surface. Remove excess flakes/aggregates from the surface. Removal of excess flakes/aggregates is carried out by sweeping up the flakes/aggregates, followed by vacuuming, until surface is free of all loose particles and dust.

**Step 4:** Finish Coat - Squeegee and back roll Sikafloor®-510 to provide a uniform coverage without ponding at a thickness of 10–15 mils (160– 107 ft<sup>2</sup>/gal). When required, repeat this procedure for a second coat.

## 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®

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CME/CMExpert type concrete moisture meter, use Sikafloor® 1610 or Sikafloor® PurCem® 22NA or 24NA. 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® PurCem® 22NA or 24NA. 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 to 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)

**Note:** Low Relative Ambient Humidity may result in slower cure.

**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: If Sikafloor®-510 is used as a primer, apply the coating to the prepared substrate using a squeegee and back roll to provide uniform coverage. Ensure that the coating is pore-free and pinhole-free and provides uniform and complete coverage over the entire 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 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.

- 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.

## 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.

## OTHER RESTRICTIONS

See Legal Disclaimer.

## ENVIRONMENTAL, HEALTH AND SAFETY

**Component A.** Warning: Corrosive, irritant, sensitizing contains Aldamine (CAS 54914-37-3). In contact with skin and eyes cause severe burns. Causes irritation of eyes, skin and respiratory tract. Prolonged or repeated contact may cause an allergic reaction and sensitization. Harmful if swallowed. It releases concentration of vapors, the inhalation affects is harmful and can be fatal. Strictly follow the handling and storage instructions.

**Component B.** Warning: Irritant and sensitizing. Causes irritation to the skin, and in the respiratory tract. May cause allergy to skin, respiratory tract and sensitization after prolonged and repeated contact. Harmful if swallowed. It releases concentration of vapors, the inhalation affects is harmful and can be fatal. Strictly follow the handling and storage instructions.

**First aid.**

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Eyes. Wash with clean water for 15 minutes. Remove contaminated clothing and wash skin thoroughly with water for 15 minutes with soap and water. Inhalation. Move to fresh air. Do not induce vomiting. Dilute with water. Contact a doctor as soon as possible. In all cases, contact a physician immediately if symptoms persist.

## 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](http://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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