

# PRODUCT DATA SHEET

## Sikafloor<sup>®</sup>-264 ECF

### HIGH BUILD ELECTROSTATIC CONTROL EPOXY FLOOR COATING

#### PRODUCT DESCRIPTION

Sikafloor 264 ECF is a two-component ESD epoxy coating system designed to impart electrostatic control properties to a variety of substrates in conjunction with ESD footwear, including existing non-conductive substrates. Sikafloor 264 ECF is ANSI S20.20 - 2014 compliant for product qualification and demonstrates conductive properties to meet other applicable ESD standards.

#### USES

Sikafloor 264 ECF can be used in environments where the damaging effects of electrostatic discharge (ESD) cannot be tolerated. Industries currently using these coatings are:

- Electronics
- Data Processing
- Military/Aerospace
- Photographic, graphic arts
- Hazardous industries (dust or explosion hazards)

#### PRODUCT INFORMATION

<b>Packaging</b>	<u>Component A: 3.0 US gal. (11.4 L) Resin packaged in one, 5 US gal. pail</u> <u>Component B: 1.50 US gal. (5.7 L) Hardener packaged in one, 2 US gal. pail</u> <u>Components A+B: 4.5 US gal. (17.1 L)</u>
<b>Appearance / Color</b>	Refer to ESD color selection guide Other colors require lead time, or may not be possible due to pigment limitations
<b>Shelf Life</b>	12 months from the date of production protect from freezing.
<b>Storage Conditions</b>	Original, unopened and undamaged sealed packaging, in dry conditions at temperatures between +40° and +90°F (+4° and +32°C). Always refer to

	packaging		
<b>Volatile organic compound (VOC) content</b>	35 g/L (A+B Combined)		
<b>Abrasion Resistance</b>	73°F (23°C) and 50 % R.H:	(CS17/1000 cycles/grams) ASTM D4060 90 mg	
<b>Compressive Strength</b>	at 73°F (23°C) and 50 % R.H:	ASTM D695 7,426 psi (51.2 MPa)	
<b>Flexural Strength</b>	Tested at 73°F (23°C) and 50 % R.H	ASTM D638 4,902 psi (33.8 MPa)	
	Modulus of Elasticity 73°F (23°C) and 50 % R.H	ASTM C580 8.34E+05 psi (5.75E3 MPa)	
<b>Tensile Strength</b>	73°F (23°C) and 50 % R.H:	ASTM D638 4,902 psi (33.8 MPa)	
<b>Tensile Adhesion Strength</b>	73°F (23°C) and 50 % R.H:	ASTM D4541 Concrete: >350 psi (2.4 MPa) - concrete failure	
<b>Chemical Resistance</b>	Please consult Sikafloor Technical Services.		
<b>Mixing Ratio</b>	Mix all units of all components according to the instructions . Mix complete units only, do not break units down. Do not strain this material. (Ready to mix unit) Do not hand mix Sikafloor materials. Mechanically mix only. Do not strain the material. 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.		
<b>Product Temperature</b>	Precondition material for at least 24 hours between 65° to 75°F (18° to 24°C)		
<b>Ambient Air Temperature</b>	Minimum/Maximum 50°/85°F (10°/30°C)		
<b>Relative Air Humidity</b>	Minimum ambient humidity 30% Maximum ambient humidity 75% (during application and curing)		
<b>Dew Point</b>	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.		
<b>Substrate Temperature</b>	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.		
<b>Pot Life</b>	<u>Material Temperature</u> +68°F (20°C)	<u>Time</u> ~ 20 minutes*	
	Sikafloor 264 ECF must be applied and distributed immediately after mixing. *Do not apply after indicated Pot Life is exceeded.		
<b>Cure Time</b>	<u>Foot traffic</u> ~12 - 16 hours	<u>Light traffic</u> ~16 - 20 hours	<u>Full cure</u> ~ 5 - 7 days
	Electrical Properties: Full electrical properties reached within 10 days of application at 73°F (23°C) and 50 % R.H:		

## SURFACE PREPARATION

Surface must be clean, sound and dry. Remove dust, laitance, grease, curing compounds, preparation 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.

### Concrete Priming

Use of Primer on concrete substrate and/or isolation layer on existing ESD or Epoxy coating is required. Prime with either Sikafloor 160, Sikafloor 161, Sikafloor 2540 or Sikafloor 1610. Allow the primer to cure 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.

### Electrical Grounding

The installation of an isolation layer/primer to seal the substrate is required. For applications that are more critical, or per project specifications, it is recommended that the various coatings be applied in direct, uninterrupted contact with properly prepared grounding points. Metal floor joints, metal equipment bases and steel columns or posts may be used if they have been electrically tested to confirm permanent continuity with an earth ground. Generally, a minimum of one grounding point per every 2,000 square feet of flooring is sufficient for proper dissipation of static electricity. Adhesive backed copper grounding tape may be used as a grounding point. Copper tape can also be used to bridge control joints around columns or different concrete slabs. Copper tape and the Sikafloor 264 ECF coating cannot be expected to maintain integrity over expansion joints that experience wide movement. Embedded grounding points, such as copper tape, grounding snaps, etc, must be placed on top of a primer/isolation layer prior to installation of Sikafloor 222W conductive primer.

### Methods of installation include, but are not limited to, the following techniques:

1. Use the copper tape to make an electrical connection with the green wire or grounding portion of an electrical outlet. A 4 in. (10.2 cm) portion of the copper tape is adhered to the primed floor surface. The copper tape must be installed under the conductive primer. Run the remaining tape up the wall and attach it to the electrical outlet. A variation of this technique involves dropping a No. 16 or 18 gage copper wire, inside the wall from any convenient ground bus so that the wire emerges at the floor/wall junction. At this point, a small hole cut into the drywall or chipped out of the concrete to allow the copper wire to emerge.

The copper grounding strip is intertwined with, or soldered to, the stranded copper wire. If intertwined, use a conductive adhesive tape to secure the copper tape with the copper wire. Insert the connection of the copper tape and wire into the wall. The balance of the grounding strip, typically 4 in. (10.2 cm.) is then adhered to the floor.

2. The copper tape can be used to make ground connections with steel columns. The copper tape is adhered to the floor and run up onto the lightly sanded steel column or base. Drill and tap a hole into the steel column or base secure the copper tape using a machine screw and washer.

### Conductive Primer

Sikafloor 222W conductive primer is used in conjunction with Sikafloor 264 ECF: test the primed surface for conductivity prior to the application of Sikafloor 264 ECF. A value of < 5.0X 10E3 ohms per ANSI/ESD S7.1/ASTM F-150 must be achieved. Do not use with Sikafloor 220W conductive primer. Use only Sikafloor 222W conductive primer.

## MIXING

Mix full units only

Premix each component separately. Stir Component A container with a long margin tool to ensure contents are evenly distributed scraping the sides, corners and bottom of the pail. A Jiffy-type mixing paddle with a variable speed mixing drill is used to premix the Component A, then add the Component B to the pigmented Component A and mix for 3 minutes at a moderate speed (300rpm), scraping the container sides, bottom, and corners with a flat or straight edge trowel at least once to ensure complete mixing. Do not strain material. Straining will remove conductive element. Do not mix more material than can be applied within the working time limits (i.e. Pot Life) at the actual field temperature. Sikafloor 264 ECF must be placed and distributed on the application surface immediately after mixing.

## APPLICATION

The Sikafloor 264 ECF should be applied with a notched squeegee over a smooth primed substrate. The notched squeegee should be 18 to 24 inches (45.6 to 60.1 cm) long with 1/16 (1.6 mm) notches at 1/4 inch (6.4 mm) intervals. This type of squeegee will apply sufficient material to achieve 15 - 18 wet mils when back rolled. Back rolling is typically done with a 9 inch (22.8 cm) or 18 in (45.6 cm) wide, 3/8 inch (9.5 mm) short nap, solvent resistant roller cover. Back roll the Sikafloor 264 ECF to level the material applied. Over-rolling and late back rolling may cause bubbling and leave roller marks. Divide the floor into sections that can be completed without stopping. When ending a section, tape it off to form a clean edge for an adjacent section.

The recommended application procedures are:

1. Take one 4.5 gallon pail of the mixed Sikafloor 264 ECF and start at one end of the section to be coated. Trim the walls and/or obstructions in the immediate area where the coating will be applied. Pour the Sikafloor 264 ECF in a line approximately 1 ft (0.3 m) from the wall or starting line along the entire width of the section to be coated.
2. The person using the squeegee can then make one pass along the wall or starting line, turn and come back making a second pass adjacent to the first pass. Next, use the rollers to level the Sikafloor 264 ECF squeegee applied material. One person can roll apply a 15 to 20 ft (4.6 - 6.1 m) wide section. Do this as quickly as possible.
3. Pour another line of Sikafloor 264 ECF approximately 1 ft (0.3 m) from the rolled area and repeat step 2. The rolling personnel should make sure they are not leaving puddles or thick sections of Sikafloor 264 ECF at the junction of the previously rolled and freshly applied Sikafloor 264 ECF
4. Follow these procedures until the section is completed. If the work must stop for any reason, use a tapeline as a breaking point

## LIMITATIONS

### 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  $\leq 4\%$  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 PurCem 22NA/24NA. 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 22NA/24NA 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.

## 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

## 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.

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