BUILDING TRUST

PRODUCT DATA SHEET

Sikafloor®-315 ESD

ABRASION RESISTANT, LOW VOC ALIPHATIC POLYURETHANE

PRODUCT DESCRIPTION

Sikafloor®-315 ESD is a high solids, low VOC, UV and chemical resistant aliphatic polyurethane coating that complies with ANSI S20.20-2021. It is a four-part pigmented coating. Wear additive is included for increased abrasion resistance. Sikafloor®-315 ESD is NMP resistant.

USES

Sikafloor®-315 ESD may only be used by experienced professionals.

It is designed to impart electrostatic control properties to a variety of substrates, including non-conductive coatings or resurfacers. Sikafloor®-315 ESD can be used in almost any environment where the damaging effects of electrostatic discharge (ESD) cannot be tolerated. Industries currently using these coatings are:

- EV Battery Plants
- Semiconductor Plants
- Electronics Manufacturing
- Data Processing Facilities
- Military/Aerospace
- Biopharma/Clean Rooms
- Hazardous/Combustive Environment
- Chemical Production and Containment

CHARACTERISTICS / ADVANTAGES

- Conforms to ANSI S20.20-2021
- Conforms to ANSI/ESD 97.1 with compliant footwear or shoe grounders
- Consistent resistance measurements are obtained when testing in accordance with standard methods
- Low body voltage generation values possible when wearing compliant footwear
- Maintains ESD performance over the wear life of the coating
- Maintains electrical conductivity throughout the entire thickness of the system
- Does not depend upon relative humidity for conductivity properties
- Excellent hard-wearing surface
- Tough, non-porous surface is easy to clean and maintain
- Excellent abrasion resistance
- NMP resistance when tested in accordance with ASTM D1308 test method 3.1.1 spot test, covered 14 days

PRODUCT INFORMATION

Packaging	Component A	0.34 US gal. (1.3 L) fill in a 1/2 gal can
	Component B	2.00 US gal (7.6 L) fill in a 2 gal pail
	ESD/Wear Additive	7.5 lbs in a 2 gal pail
	ESD Color Additive	**1 pint can**
	Components A+B+C+Color additive	2.75 US gallons
Shelf Life	24 months in original unopened container under proper storage conditions	
Storage Conditions	Store dry between 40° - 90°F (4° - 32°C)	
Color	Use Sikafloor ESD Pigment Packages	

TECHNICAL INFORMATION

Tensile Strength	2,882 Psi	ASTM D2370 at 73°F (23°C) and 50% R.H
Tensile Adhesion Strength	>400 Psi (2.75 MPa)	ASTM D4541 at 73°F (23°C) and 50% R.H
Electrostatic Behavior	<1.0 x 10^9 ohms resistance	ANSI STM S7.1
Chemical Resistance	Please consult Sikafloor Technical Services	

APPLICATION INFORMATION

Mixing Ratio

Mix full units only = A+B+C+1 ESD pigment pack

Coverage

Theoretical coverage for 2.75 gallon unit = 1,257 ft^2 per coat at 3.5 wet mils

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.

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.

Cure Time

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

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.

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-6 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®-1620 or Sikafloor®-24NA PurCem.

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.
- Do not apply Sikafloor®-315 ESD directly onto concrete substrate. Use of Sikafloor primer and/or insulating layer prior to the application of Sikafloor®-315 ESD is required.
- Polymer concrete reinforcement fibers may interfere with conductive properties of Sikafloor ESD products. Consult Technical Services before applying to fiber reinforced substrates.
- Do not apply Sikafloor®-315 ESD 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.

ENVIRONMENTAL, HEALTH AND SAFETY

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

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 dressed off to achieve a level surface prior to 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-6 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 3,625 psi (25 MPa) at 28 days and at least 218 psi (1.5 MPa) in tension at the time of application. For other substrates, please contact Sikafloor Technical Services.

PRIMER COATING
Use of primer on concrete substrate and/or isolation layer on existing ESD or Epoxy coating is required. Prime with either Sikafloor®-165 FS, Sikafloor®-161, Sikafloor®-1620 or Sikafloor®-2570 WB. 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.

INTERMEDIATE COATING
Sikafloor®-315 ESD requires an intermediate coat of Sikafloor®-219 pigmented in a similar color to insure adequate hiding. Other Sikafloor epoxies can be substituted for Sikafloor®-219 if needed.

ELECTRICAL GROUNDING
The installation of an isolation layer/primer to seal the substrate is required. A high degree of ESD control may be achieved with ESD topcoats without direct connection to an earth grounding point. 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 1,000 square feet of flooring is sufficient for proper dissipation of static electricity. Adhesive backed copper grounding tape is 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®-315 ESD cannot be expected to maintain integrity over expansion joints that experience side 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®-315 ESD. Methods of installation include, but are not limited to, the following techniques:

- Use the Sika Earthing Kit to make an electrical connection with the green wire or a proper grounding point.
- A 4 in. (10.2 cm) portion of the copper tape is adhered to the floor (cured primer or directly beneath the first coat of Sikafloor®-315 ESD). Run the remaining tape up the wall and attach it to the electrical outlet.
- A variation of this technique involves dropping a No. 10 or 12 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 cute 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.
- 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 and secure the copper tape using a machine screw and washer.

MIXING

Mix full units only = A+B+C+**1 ESD pigment pack**. Sikafloor®-315 ESD must be applied with the recommended addition of the ESD/Wear Additive.

Premix Component A using a variable speed drill and Jiffy-type mixing blade for a minimum of 1 minute. While continuing to mix Component A, add the ESD pigment pack and Component B. Continue to mix for 3 minutes at a moderate speed while scraping the container sides and bottom with the mixer. **Add the entire Component C ESD/Wear Additive** and mix for 3 minutes and until uniform. Scrape the container sides, bottom, and corners 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. Sikafloor®-315 ESD must be placed and distributed on the application surface immediately after 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

The floor must be divided into sections (at expansion joints or doorways when possible) that can be completed without stopping. When ending a section, tape it off to form a clean edge for an adjacent section. Sikafloor®-315 ESD must be applied with a 3/8" nap roller and roller trays. 18 inch roller assemblies and trays are recommended. The roller should be wet in the tray and the excess coating removed by lightly rolling in the tray to avoid drips.

Apply 3 pairs of 6-8 foot V shape cross paths on the floor. Spread the material with roller passes perpendicular to the paths of the coating. Back rolling is essential to relieve coating of roller marks. It is extremely important to apply Sikafloor®-315 ESD at a rate of 3-3.5 wet mils to achieve proper appearance, texture, color development, and consistent ESD properties. If applied too thick, the coating may be soft. If applied too thin, the coating will appear very flat in sheen and may exhibit poor electrical properties.

Work evenly to avoid late 'tie-ins' and rolling into previously applied adjacent material. Doing so may result in color variations. It is also especially important to remix the material in the trays often with the roller to keep the ESD/Wear Additive suspended and not settling out.

OTHER RESTRICTIONS

See Legal Disclaimer.

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 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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