

Sikafloor® 100 ESD

Conductive Black Epoxy Primer

Description Sikafloor 100 ESD is a two-component epoxy resin conductive primer. It is designed for use in combination with Sikafloor 200C ESD, and Sikafloor 700 ESD when desiring resistance readings in the conductive range of $2.5 \times 10^4 - 1.0 \times 10^6$ ohms. Sikafloor 100 ESD is useful on a variety of substrates, including existing non-conductive coatings or resurfacers and epoxy primed concrete.

Where to Use

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

Advantages

- Use when desiring resistance readings in the conductive range.
- Consistent resistance measurements are obtained when tested at 10 to 100 volts.
- Meets EOS/ESD standard 7.1 for conductive and static dissipative coatings.
- Dissipates a 5000 volt charge to zero in less than 0.1 seconds (72°F @ 12% R H).
- Maintains ESD performance over wear life of the coating.
- Does not depend on relative humidity for conductivity properties.
- Product may be roller applied as supplied; in-field thinning with solvent is not recommended.
- No induction time.

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 and contaminant free, open textured surface by shot blasting or equivalent mechanical means. (CSP-3 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. It is also possible that the texture of the "shot-blast pattern may show through the last coat. This is known as "tracking". The compressive strength of the concrete substrate should be at least 3500 psi (24 MPa) at 28 days and at least 250 psi (1.7 MPa) Sikafloor 107 or 207 high solids primer is required for priming substrates prior to applying Sikafloor 100 ESD Installing an insulative primer typically seals the substrate.

Typical Data

Viscosity	500-1500 cps 73°F (23°C)
Weight/Gallon	9.78 lbs./gal (1.4 kg./liter)
VOC Content	Does not exceed 400 grams/liter (3.3 lbs. /gal)
Non-Volatile Content	65% by weight 53% by volume

Coverage	Applied at 5-6 wet mils. Dry film thickness is 3.2 mils 4.2-gallon mix = 1122 sq. ft. 1.1-gallon mix = 295 sq. ft.
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Cure Mechanism	Drying Time Substrate at 73°F (23°C), 50% RH Tack Free 2-3 hours Dry Hard 4-6 hours Full Cure 5-7 days
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Shelf Life: 3 months in original unopened container under proper storage conditions. Store dry between 40° - 90°F (5° - 32°C).

Packaging:

2.2 Gallon Kit, Mix Ratio - 3.5R : 1H
Part R: (2) 2 gallon pails w/0.90 gal per pail
Part H: Carton w/two quart cans 0.20 gal/can

8.4 Gallon Kit, Mix Ratio - 3.5R : 1H
Part R: (2) 5 gallon pails 3.45 gal/pail
Part H: Carton w/two 1 gallon cans 0.75 gal/can



Industrial Flooring

Electrical Grounding	<p>A high degree of ESD control can be achieved with ESD top coats without direct connection to an earth grounding point; this is especially true for installations directly over concrete. However, for applications that are more critical or per project specifications, it is required that the various coatings (especially the conductive primer if a conductive system is being installed) 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 1000 square feet of flooring is sufficient for proper dissipation of static electricity.</p>
Mixing	<p>Sikafloor 100 ESD primer is applied in one 6-mil coat. Before applying the ESD primer the substrate must be pre-primed with a Sikafloor primer, Sikafloor 107 or 207, to insulate and seal the substrate. Rough floors, may not be covered with a thin film coating or sealer and may require a higher solids thick film Sika Corporation's ESD top coat or Sikafloor epoxy mortar resurfacer.</p> <p>Place a jiffy-type mixer in the Part 'R' pail. Mix for 3 minutes at a moderate speed, scraping the bottom and sides of the pail with the mixer. Then add the one-gallon can of Part 'H' to the Part 'R' and mix for 3 minutes at a moderate speed, scraping the container sides and bottom with the mixer.</p>
Application	<p>The Sikafloor 100 ESD primer is applied with a flat squeegee. This will apply sufficient material to achieve 5-6 wet mils when back rolled. The back rolling is typically done with an 18-inch (.5 m) short nap, 3/8-inch (9.5 mm), solvent resistant roller cover. Back roll the Sikafloor 100 ESD only to level the thickness of material applied. Over-rolling may cause bubbling by leaving thick or thin sections. Divide the floor into sections (at expansion joints or doorways when possible) that can be completed without stopping. Where a section will end, it should be taped off to form a straight line providing a clean edge for an adjacent section. The Sikafloor 100 ESD primer is applied with a notched squeegee. The squeegee should be approximately 36 inches (0.9 m) long with 1/32- to 1/16-inch (0.8-1.6 mm) notches at 1/4-inch (6.3 mm) intervals. This type of squeegee will apply sufficient material to achieve 5-6 wet mils when back rolled. The back rolling is typically done with an 18-inch (.5 m) short nap, 3/8-inch (9.5 mm), solvent resistant roller cover. Back roll the ESD only to level the thickness of material applied. Over-rolling may cause bubbling by leaving thick or thin sections. The recommended application procedures are:</p> <ol style="list-style-type: none">1. Take one 5-gallon (18.9 liter) pail of the mixed Sikafloor 100 ESD primer and start at one end of the floor to be coated. Trim the walls and/or obstructions in the immediate area where the coating is to be applied. Pour the ESD primer in a line approximately one foot (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 makes 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 100 ESD primer. One person can easily roll a 15- to 20-foot (13-18 m) wide section. This is done as quickly as possible.3. Pour another line of Sikafloor 100 ESD primer approximately one foot (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 the primer at the junction of the previously rolled and freshly applied section.4. Follow these procedures until the section is completed. If the work must stop for any reason, use a tapeline should as a breaking point.
Limitations	<ul style="list-style-type: none">■ Minimum/Maximum substrate temperature: 60°F/ 85°F (15.5°C/30°C).■ Minimum/Maximum relative humidity: 30%/85%.■ Substrate temperature must be 5°F (3°C) above measured dew point.■ Determine the surface moisture content by using an impedance moisture meter designed for use on concrete as detailed in ASTM E-1907. Acceptable test results shall be 4% by mass or less. If above use Sikafloor Epocem 81/82.■ Conduct quantitative anhydrous calcium chloride testing in accordance with ASTM F1869. Maximum acceptable test result is 3 pounds per 1,000 ft² per 24 hours. If above use Sikafloor Epocem 81/82.■ Do not use on exterior, on-grade substrates.■ Freshly applied Sikafloor 100 ESD should be protected from dampness, condensation and water for at least 24 hrs.■ Do not thin this product. Addition of thinners will slow the cure and reduce the ultimate properties of this product. Critical recoat times will also be affected.



Caution	<p>COMPONENT R: DANGER: FLAMMABLE, IRRITANT, SENSITIZER. Contains Bisphenol A Diglycidyl Ether Polymer (CAS: 25068-38-6), Graphite (CAS: 7782-42-5), Xylene (CAS: 1330-20-7) and Ethyl Benzene (CAS: 100-41-4). Keep away from heat, sparks, sunlight, electrical equipment, flame or other sources of ignition. VAPORS MAY IGNITE AND EXPLODE. DO NOT SMOKE. Use only in well ventilated areas. Open doors and windows during use. Eye/skin/respiratory irritant. May cause skin and respiratory sensitization. Causes burns to eyes and digestive tract. Inhalation of high concentrations may result in headaches and dizziness. Harmful if swallowed. Intentional misuse by deliberate concentration and inhalation of vapors may be harmful or fatal. Reports have associated repeated and prolonged exposure to some of the chemicals in this product with permanent brain, liver, kidney and nervous system damage. Intentional misuse by deliberate concentration and inhalation of vapors may be harmful or fatal. WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.</p> <p>COMPONENT H: DANGER: FLAMMABLE, CORROSIVE, IRRITANT, SENSITIZER. Contains Xylene (CAS: 1330-20-7), Mixed Cycloaliphatic Amines (Mixture), Benzyl Alcohol (CAS: 100-51-6), 1-(2-aminoethyl) piperazine (CAS: 140-31-8), Phenol,2,4,6 tris (CAS: 90-72-2) and Cyclohexamine 4,4-methylenebis (CAS: 1761-71-3). Keep away from heat, sparks, sunlight, electrical equipment, flame or other sources of ignition. VAPORS MAY IGNITE AND EXPLODE. DO NOT SMOKE. Use only in well ventilated areas. Open doors and windows during use. Corrosive to eyes and skin. Eye/skin/respiratory irritant. Causes burns to eyes/skin and digestive tract. May cause skin and respiratory sensitization. Inhalation of high concentration may result in headaches and dizziness. Harmful if swallowed. Intentional misuse by deliberate concentration and inhalation of vapors may be harmful or fatal. Reports have associated repeated and prolonged exposure to some of the chemicals in this product with permanent brain, liver, kidney and nervous system damage. Intentional misuse by deliberate concentration and inhalation of vapors may be harmful or fatal. WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.</p>
First Aid	<p>Eyes – Hold eyelids apart and flush thoroughly with water for 15 minutes. Skin – Remove contaminated clothing. Wash skin thoroughly for 15 minutes with soap and water. Inhalation – Remove to fresh air. Ingestion – Do not induce vomiting. Dilute with water. Contact physician. In all cases contact a physician immediately if symptoms persist.</p>
Handling and Storage	<p>Keep away from heat, sparks, sunlight, electrical equipment or flame. VAPORS MAY IGNITE AND EXPLODE. DO NOT SMOKE. Open doors and windows during use. Use adequate local and mechanical ventilation. Wear protective equipment (chemically resistant gloves/goggles/clothing) to prevent direct contact with skin and eyes. Use properly fitted NIOSH vapor cartridge respirator if ventilation is poor. Wash thoroughly with soap and water after use. Remove contaminated clothing after use. Store product in tightly sealed containers in a cool, dry well ventilated area at temperatures between 40° F and 90° F away from ignition sources.</p>
Clean Up	<p>In case of spill, eliminate all ignition and heat sources. Ventilate area. Open doors and windows. Wear chemical resistant gloves/goggles/clothing. In absence of proper ventilation use properly fitted NIOSH respirator. Confine spill, collect using noncombustible absorbent material and place in properly sealed container. Dispose of excess product in accordance with applicable local, state and federal regulations</p>
Additional Info	<p>Technical Data Sheets are updated periodically. To ensure the most current version is being used, visit Technical Resources on www.sikafloorusa.com. Proper material application is the responsibility of the user. Site visits made by Sika personnel are for making technical recommendations only and not for supervising or providing quality control. Before applying for protection against specific chemical environments, consult Chemical Resistance Guide or Sika Technical Service.</p>

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