

Sikafloor® 340 ESD

ESD Control Aliphatic Polyester Urethane Coating

Description	Sikafloor 340 ESD is a five component, aliphatic, polyester, ESD control, polyurethane system.
Where to Use	<p>It is designed to impart electrostatic control properties to a variety of substrates, including existing non-conductive coatings or resurfacers, vinyl tile, static control tile and concrete. Sikafloor 340 ESD keeps these surfaces smooth, bright, and far more chemically resistant. Its aliphatic nature will keep the coating from yellowing when exposed to ultraviolet light (UV). Sikafloor 340 ESD can be used in almost any environment where the damaging effects of electrostatic discharge (ESD) cannot be tolerated. Industries currently using Sikafloor 340 ESD:</p> <ul style="list-style-type: none"> ■ Electronics ■ Data processing ■ Military/Aerospace ■ Photographic, graphic arts ■ Hazard industries (dust or explosion hazards)
Advantages	<ul style="list-style-type: none"> ■ Consistent resistance measurements are obtained when tested at 10 to 500 volts ■ Less than 15 volts Body Voltage Generations when utilizing ESD footwear ■ Available in STATIC DISSIPATIVE (1.0×10^6 to 1.0×10^9) range per EOS/ESD standard ■ Dissipates a 5000 volt charge to zero in less than 0.1 seconds (72°F @ 12% RH) TM ■ Maintains ESD performance over wear life of the ESD coating ■ Maintains electrical conductivity throughout the entire thickness of the system ■ Does not depend on relative humidity for conductivity properties ■ Product may be roller applied as supplied; in-field thinning with solvent is not recommended ■ Excellent wear, abrasion and impact resistance. ■ Tough, slight nonskid, non-porous surface is easy to clean and allows repeated washings and decontaminations ■ Good stain resistance ■ Broad range of colors (pastels to dark) ■ Easy to apply, Easy one step recoat ■ Easy to maintain and simple to clean

Typical Data

Coverage

Sikafloor 340 ESD cannot be used without Sikafloor 107 or 207 primer.
The theoretical coverage at 4 wet mils is:
4.90 mixed gallons = 1964 sq. ft. (181 sq. m.)
2.45 mixed gallons = 982 sq. ft. (91 sq. m.)

Cure Mechanism

Temperature	Working Time	Recoat Time Minimum	Recoat Time Maximum
55°F (13°C)	40 minutes	14-16 hours	36 hours
73°F (23°C)	30 minutes	10-12 hours	24 hours
90°F (32°C)	20 minutes	8-10 hours	16 hours

Shelf Life: 1 years in original unopened container under proper storage conditions. Store dry between 40° - 90°F (5° - 32°C).

Packaging:

4.6 Gallon Kit	
Part R	carton w/two 1 gallon cans 0.70 gal/can
Part H	carton w/two 1/2 gallon cans
Color Pack	carton w/two Pint cans 0.125 gal/can
ESD Pack	(2) 3 gallon pails 0.975 gal/can
Non-Slip additive	carton w/two 1/2 Pint cans (0.0625 gal/can

9.22 Gallon Kit	
Part R	(2) 2 gallon pails 1.4 gal/pail
Part H	carton w/two 1 Gallon cans
Color Pack	(2) cartons w/two Pint cans 0.25 gal/can
ESD Pack	(2) 5 gallon pails 1.98 gal/pail
Non-Slip additive	carton w/two Pint cans 0.125 gal/can



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Chemical Resistance	Excellent overall chemical resistance to a wide spectrum of chemicals, including: <ol style="list-style-type: none">1. Hydrazine - limited spillage2. Aromatic and aliphatic hydrocarbons3. Hydraulic fluids (Skydrol 500), jet fuel4. Acids, alkalis and alcohols5. Detergents, salts and cutting oils
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 shotblast 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) in tension at the time of application of Sikafloor 107 or 207 prime coat. Sikafloor 107 or 207 high solids primer is required for priming substrates prior to applying Sikafloor 340 ESD.
Electrical Grounding	Installing an insulative primer typically seals the substrate. 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 recommended 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.
Mixing	Do not mix more material than can be applied within the working time limits at the actual field temperature. Place a variable speed mixing drill with a jiffy-type-mixing paddle into the ESD Pack and mix until all material that may have settled is mixed thoroughly and uniformly free of lumps. Then add the pint can of Non-Slip Additive and the Part R. Mix for 2 minutes. Then add the pint can (two cans for the large unit) of ESD color pack and mix for 1 minute. Finally, add the entire contents of the 1-gallon can of Part H and mix for 2 minutes, scraping the container sides and bottom with the mixer. Note: The Part H is a viscous material. Simply pouring the material out of the can may not empty the container completely. Scrape the can with a clean spatula to remove residual material that may remain in the can.
Application	The floor should 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. The Sikafloor 340 ESD must be applied with a 3/8" nap roller and roller trays. 18 inch roller assemblies and trays are preferred. The roller should be wet in the tray and then the excess coating is removed by lightly rolling in the tray so as to avoid drips. Then apply 3 pairs of 6-8 foot long paths on to the floor. Then spread the material with roller passes perpendicular to the paths of coating. It is extremely important to apply the coating at a rate of 4-5 mils to achieve proper appearance, texture, and color development, and consistent ESD properties. If areas are too thick, the coating may be too soft, if too thin, the coating will appear very flat in sheen and may exhibit poor electrical properties. It is also very important to remix the material often with the roller in the tray to keep the Non-Slip Additive from settling.
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 (1.5 kg per 100 m²) per 24 hours. If over, use Sikafloor Epocem 81/82.■ Do not use on exterior, on-grade substrates.■ Freshly applied Sikafloor 340 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. Contains Propylene Glycol Monomethyl Ether Acetate (CAS: 108-65-6), Polyol (CAS:37625-56-2), 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. Causes eye/skin/respiratory irritation. Inhalation can result in headaches and dizziness. Harmful if swallowed. 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: WARNING: IRRITANT, SENSITIZER. Contains Hexane, 1,6 Diisocyanate, Homopolymer (CAS: 28182-81-2) and Hexamethylene Diisocyanate (CAS:822-06-0). Causes eye irritation. May cause skin and respiratory irritation. May cause skin and respiratory sensitization. May be harmful if swallowed. May be harmful if inhaled. 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 C (ESD Pack): DANGER: FLAMMABLE, IRRITANT. Contains MICA (CAS: 12001-26-2), Tin Antimony Oxide (CAS:68187-54-2), Xylene (CAS:1330-20-7), 1-Methoxy-2-Propanol Acetate (CAS:108-65-6), Aluminum Oxide (1344-28-1) Propylene Glycol Methyl Ether (CAS:107-98-2), Silica (CAS:14808-60-7), Ethyl Benzene (CAS:100-41-4) and Aromatic Petroleum Naphtha (CAS:64742-95-6). 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. May cause eye/skin/respiratory irritation. Inhalation can result in headaches and dizziness. Harmful if swallowed. 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 Aggregate (Additive): WARNING: IRRITANT, SENSITIZER. Contains Glass Oxide (CAS: 65997-17-3). May cause eye and skin irritation. May be harmful if swallowed.</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>Part R and ESD Pack: 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 45° F and 75°F away from ignition sources. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material.</p> <p>Part H and Aggregate: Avoid direct contact. Wear personal protective equipment (chemical resistant goggles/gloves/clothing) to prevent direct contact with skin and eyes. Use only in well ventilated areas. Open doors and windows during use. Use a properly fitted NIOSH respirator if ventilation is poor. Wash thoroughly with soap and water after use. Remove contaminated clothing and launder before reuse.</p>
Clean Up	<p>Part R and ESD Pack: 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> <p>Part H and Aggregate: Use personal protective equipment (chemical resistant gloves/ goggles/ clothing). Without direct contact, sweep up spilled or excess product and place in suitable sealed container. Dispose of excess product and container in accordance with applicable local, state, and federal regulations.</p>

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Additional Info

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.

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