

## Sikafloor® 200 ESD

### High Build Electrostatic Control Epoxy Coating

**Description** Sikafloor 200 ESD and Sikafloor 200C ESD coatings are four-component ESD epoxy coating systems designed to impart electrostatic control properties to a variety of substrates in conjunction with ESD footwear, including existing non-conductive substrates and concrete. They are available in both the static dissipative and conductive resistance ranges. Both have a unique combination of ESD control properties, impact resistance and high bond strength to concrete. Sikafloor 200 will impart static dissipative resistance readings as a stand alone topcoat atop a standard epoxy concrete primer such as Sikafloor 207.

**Where to Use** Sikafloor 200 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:

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

#### Typical Data

Abrasion Resistance	CS-17 Wheels 160-180 mgs. / 1000 cycles (ASTM D 4060 Taber Abraser 1000 gm. load per wheel)		
Impact Resistance	80 in.-lbs. (89.6 cm.-kg.) direct and reverse. (ASTM D 2794 Gardner)		
Flexibility	1/4 in. (.62 cm.) passes test (ASTM D 522 Conical Mandrel)		
Hardness	B (ASTM D 3363 Pencil)		
Adhesion	Concrete: 350 psi (2.4 MPa) - concrete failure (ASTM D 4541 Elcometer)		
Gloss	(60°) 80-95		
Viscosity	300-650 cps. @ 73° F (23° C)		
Weight/Gallon	10.55 lbs. / gal. (1.26 kg. / liter)		
VOC Content	Does not exceed 50 grams/liter (.42 lbs. /gal)		
Non-Volatile Content	Depending upon the epoxy color pack used the volume and weight percent solids can range from 98-100 % (for Pigmented unsolvated coatings)		
<b>Coverage</b>	3.55 mixed gallons @ 12 mils = 475 sq. ft. (44 sq. m.) Slight orange peel/stipple finish		
	3.55 mixed gallons @ 15 mils = 380 sq. ft. (35 sq. m.) Smoother finish/very slight stipple		
	3.55 mixed gallons @ 20 mils = 285 sq. ft. (26 sq. m.) Smooth finish.		
	1.77 mixed gallons @ 12 mils = 238 sq. ft. (22 sq. m.)		
	1.77 mixed gallons @ 15 mils = 190 sq. ft. (17 sq. m.)		
	1.77 mixed gallons @ 20 mils = 140 sq. ft. (13 sq. m.)		
	(Sikafloor 200C ESD must not be applied over 15 mils)		
<b>Cure Mechanism</b>	55°F (13°C)	73°F (23°C)	90°F (32°C)
For minimum foot traffic	16-20 hours	12-16 hours	8-10 hours
For moderate foot/tow motor traffic	0-24 hours	16-20 hours	10-14 hrs.
Complete cure	168 hours	120 hours	72 hours

**Shelf Life:** 3 months in original unopened container under proper storage conditions. Store dry between 40° - 90°F (5° - 32°C).

#### Packaging:

Kits	3.56 Gallon Kit
Part R	(2) 2 gallon pails 1.09 gal/pail
Part H	Carton w/two half gallon cans
Color Pack	Carton w/two Pint cans 0.125 gal/can
ESD Pack	Carton w/two Half Pint cans 0.0625 gal/can
Kits	7.12 Gallon Kit
Part R	(2) 5 gallon pails 2.18 gal/pail
Part H	Carton w/two 1 Gallon cans
Color Pack	(2) Cartons w/two Pint cans 0.25 gal/can
ESD Pack	Carton w/two Pint cans 0.125 gal/can



## Advantages

- Consistent resistance measurements are obtained when tested at 10 to 500 volts.
- Less than 15 volts Body Voltage Generation when wearing SD footwear.
- Available in static dissipative range ( $1.0 \times 10^6$  to  $1.0 \times 10^9$ ) ohms per EOS/ESD standards.
- Available in conductive range ( $2.5 \times 10^4$  to  $1.0 \times 10^6$ ) ohms per ANSI/ESD S7.1 when used in conjunction with Sikafloor 100 conductive primer.
- Maintains ESD performance over the 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 not recommended.
- Excellent hard wearing surface.
- Tough, smooth, non-porous surface is easy to clean and allows repeated washings and decontaminations.
- Good abrasion resistance.
- Excellent impact resistance.
- High gloss.

## 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) 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 200ESD. Sikafloor 200C ESD Conductive must be used in conjunction with both a standard epoxy primer, Sikafloor 107 or 207, AND Sikafloor 100 conductive primer for conductive floor applications.

### 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 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.

### Mixing

A jiffy-type mixing paddle with a variable speed mixing drill is placed in the Part R container and while running add the color pack ESD colorpack and flow additive to the vortex of the mix. Then add the one-gallon can of Part H to the pigmented Part R and mix for 3 minutes at a moderate speed, scraping the container sides and bottom with the mixer.

### Application

The back rolling is typically done with a 9 or 18 inch short nap, 3/8-inch, solvent resistant roller cover. The Sikafloor 200 ESD is back rolled to level the squeegee applied material; over-rolling will cause bubbling. Recommended thickness is 12 - 20 mils

### Limitations

- 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 ft<sup>2</sup> (1.5 kg per 100 m<sup>2</sup>) per 24 hours. If above use Sikafloor Epocem 81/82.
- Do not use on exterior, on-grade substrates.
- Freshly applied Sikafloor 200 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.

# Industrial Flooring

<b>Caution</b>	<p><b>COMPONENT R: WARNING: IRRITANT, SENSITIZER.</b> Contains Modified Epoxy Resins (Mixture), Tin Antimony Oxide (CAS: 68187-54-2), MICA (CAS: 12001-26-2), Silica Crystalline (CAS: 14808-60-7) and Benzyl Alcohol (CAS: 100-51-6). Causes eye irritation. May cause skin and respiratory irritation. May cause skin/respiratory sensitization. Reports have associated repeated and prolonged exposure to some of the chemicals in this product with permanent brain, liver, kidney and nervous system damage. <b>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.</b></p> <p><b>COMPONENT H: WARNING: CORROSIVE, IRRITANT, SENSITIZER.</b> Contains Proprietary Blend of Aliphatic and Cycloaliphatic Amines (Mixture) and Blend of Phenols (Mixture). Causes burns to eyes/skin and digestive tract. Causes eye, skin and respiratory irritation. May cause skin/respiratory sensitization. Harmful if swallowed. <b>Deliberate misuse by inhalation of vapors may be harmful or fatal. Strictly follow all usage, handling and storage instructions.</b></p> <p><b>Flow Additive: CAUTION: IRRITANT.</b> Contains Benzyl Alcohol (CAS: 100-51-6), Aromatic Petroleum Naphtha (64742-95-6). Causes eye irritation. May cause eye and skin irritation. Reports have associated repeated and prolonged exposure to some of the chemicals in this product with permanent brain, liver, kidney and nervous system damage. <b>Intentional misuse by deliberate concentration and inhalation of vapors may be harmful or fatal.</b></p>
<b>First Aid</b>	<p><b>Part R, H and Flow Additive: Eyes</b> – Hold eyelids apart and flush thoroughly with water for 15 minutes. <b>Skin</b> – Remove contaminated clothing. Wash skin thoroughly for 15 minutes with soap and water. <b>Inhalation</b> – Remove to fresh air. <b>Ingestion</b> – Do not induce vomiting. Dilute with water. <b>Contact physician. In all cases contact a physician immediately if symptoms persist.</b></p>
<b>Handling and Storage</b>	<p><b>Part R and Flow Additive:</b> 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 laundry before reuse.</p> <p><b>Part H:</b> 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 laundry before reuse.</p>
<b>Clean Up</b>	<p><b>Part R: and Flow Additive:</b> 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> <p><b>Part H:</b> Avoid contact. Wear chemical resistant clothing/gloves/goggles. In absence of adequate ventilation; use a properly fitted NIOSH respirator. Uncured material can be removed with approved solvent. Follow solvent manufacturer's instructions for use and warnings. Cured material (when Component R combined with Component H) can only be removed mechanically. In case of spill, ventilate area and contain spill. Collect with absorbent material. Dispose of in accordance with current, applicable local, state, and federal regulations.</p>
<b>Additional Info</b>	<p>Technical Data Sheets are updated periodically. To ensure the most current version is being used, visit Technical Resources on <a href="http://www.sikafloorusa.com">www.sikafloorusa.com</a>. 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>

**KEEP CONTAINER TIGHTLY CLOSED • KEEP OUT OF REACH OF CHILDREN • NOT FOR INTERNAL CONSUMPTION • FOR INDUSTRIAL USE ONLY**

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