



MiraFlor ESD

Product Technical Data Sheet

MiraFlor ESD is a monolithic, two-component, high solids, water-based electrostatic dissipative epoxy flooring system designed for use in environments subject to potential damage caused by electrostatic discharge. It is applied over a separate Miracote epoxy concrete primer and applicable compliant grounding as per ANSI ESD S6.1-2019.

WHERE TO USE

- Clean rooms
- Electronics manufacturing and distribution
- Hazardous industries (dust/explosion potential)
- Areas requiring a grounded floor surface
- Circuit board assembly facilities
- Computer server farms
- Hyperbaric spaces in healthcare settings
- Electronic testing laboratories
- Data processing areas
- Military and aerospace industries

ADVANTAGES

- Dissipates 5,000 volt charge to 0 volts in 0.01 seconds
- Convenient 1A to 1B mixing ratio.
- More durable over tile/sheet goods exposed to vehicular traffic
- Sanitary.
- Shorter cure time versus standard epoxy systems.
- Extended pot life for longer working time.
- Quicker return to service.
- Good chemical and abrasion resistance.
- Low odor and solvent free.

THEORETICAL COVERAGE RATES

133 sq. ft. per gallon @ (12 mils WFT).

PACKAGING and COLORS

Kit Sizes: 2-gallon

Component A: 1-gal.

Component B: 1-gal.

#413, #431, #402 - Refer to Miracote Color Chart #543

MIX RATIO

Comp. A to Comp. B = 1:1 by volume.

SHELF LIFE AND STORAGE

One year from the date of manufacture as long as containers remain unopened and material is stored in a protected environment free from moisture, excessive heat, freezing temperatures, and direct sunlight.

TYPICAL PHYSICAL PROPERTIES @ 75°F (24°C)

Vehicle type.....	Water-based epoxy
Viscosity.....	1,900-2,100 cps
Volume Solids (mixed).....	85%
Pot Life.....	Approximately 35 minutes
Dry Time (Tack Free).....	8-12 hrs.
Light Traffic.....	4-6 hrs.
Recoat Time.....	12-48 hrs.
Adhesion ASTM D4541.....	> 400 psi (100% cohesive failure in concrete)
VOC EPA Method 24.....	<5 g/L
Electrical Transmission Properties.....	1E ⁶ -1E ⁹ ohms
Abrasion Resistance ASTM D4060.....	60 mg (CS 17 wheel, 1000 gram load, 1000 cycles)
Chemical Resistance.....	Refer to Chemical Resistance Chart

OVERVIEW OF INSTALLATION STEPS

• **Surface Preparation** – All surfaces must be clean, sound, dry and free from any bond inhibiting substances including, but not limited to, grease, oil and any other contaminants or loosely adhered materials. For concrete substrates, a minimum surface profile of CSP 2 or 3 is required depending on overall substrate conditions and coating requirements.

• **Prime Concrete Substrate** – Mix and apply appropriate MiraPrime concrete primer depending on results of completed moisture vapor emission testing. Refer to product technical data sheet and installation guide for the selected primer.

• **Mixing** – *MiraFlor ESD* epoxy components must be mixed mechanically using a low-speed drill (300-450 rpm) until well blended with a “Jiffy-type” or similar Miracote-approved mixing paddle. Prior to blending both A and B components together, premix each component for 60 seconds. Then empty entire contents of components A and B into a clean mixing vessel. Blend for approximately 3 minutes keeping the mixing head fully immersed at all times. At least once while mixing, stop to scrape down the sides and bottom of the pail to ensure thorough mixing of both components. Once completely mixed and in observance of pot life, dispense material immediately from the pail to the substrate.

Application – Pour out mixed *MiraFlor ESD* in a large ribbon across the properly primed and grounded concrete surface or other type of substrate. Spread evenly with a notched squeegee, and back-roll with a high quality, phenolic core, industrial grade, 3/8” maximum non-shedding nap roller to achieve mil consistency. Consider use of roller cage end caps for precision gauging millage and minimal waste. The application of two coats is required.

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FOR BEST RESULTS

- Always install a minimum 4' by 4' test area site mock-up for approval of acceptable color, texture, finish, adhesion, and any other critical requirement acceptable to the owner prior to proceeding with the installation.
- Verify and download current versions of product technical data sheets (PTDS), material safety data sheets (MSDS), and installation guides (IG) at www.miracote.com.
- Protect materials at all times from excessive heat and cold, and pre-condition to room temperature, as necessary.
- Regularly check wet film thickness with mil gauge and monitor consumption to ensure correct application rates are obtained.
- The proper application of this product is the sole responsibility of the end user. Job site visits by Miracote representatives are only for the purpose of making recommendations, and do not assume any liability for supervision or quality control.
- Measure ambient and surface temperatures to ensure the material is only applied between a minimum of 50° F and a maximum of 90° F during placement and cure time.
- Consider the use of *MiraPrime Aqua-Blok XL* to pretreat concrete floor slabs to mitigate the potential for the migration of efflorescence and development of osmotic pressure.
- Provide proper grounding of the floor surface in accordance with ANSI ESD S61-2019.
- Always apply a minimum of two coats each at 12 mil WFT.

LIMITATIONS

- Intended for use by professional installers only.
- Not intended for use in exterior environments due to potential for yellowing from UV exposure.
- Minimum ambient/substrate temperature of 50°F (10°C) required.
- Concrete must be minimum age of 7 days, depending on curing and drying conditions.
- Color may yellow over time when exposed to UV.
- Maximum allowable moisture vapor transmission (MVT) of 10.0 lbs./1000 sf./per 24 hr. period per ASTM F1869 (CaCl Testing).
- Maximum allowable moisture vapor transmission (MVT) of 84% RH as per ASTM F2170 (RH-Relative Humidity Testing).
- Use MiraPrime MVERS Plus epoxy moisture mitigation primer over concrete substrates that have MVT emissions that exceed these limits.

LIMITED WARRANTY

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CAUTION: ALWAYS KEEP OUT OF THE REACH OF CHILDREN.



Miracote Product Line
Crossfield Products Corp

www.miracote.com

East Coast Office
140 Valley Road
Roselle Park, NJ 07204
P: (908) 245-2808
F: (908) 245-0659

West Coast Office
3000 E. Harcourt Street
Rancho Dominguez, CA 90221
P: (310) 631-6594
F: (310) 886-9119



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