



ESD-20

Epoxy Flooring System

PRODUCT DATA

PRODUCT DESCRIPTION

Petra ESD-20 is a 3 step, ESD epoxy system designed to meet the need for the control of electrostatic discharge in various working environments.

FEATURES AND ADVANTAGES

- Packaged in kits for ease of use.
- Extremely durable for use in high traffic areas.
- Can be ordered in Static Dissipative (1×10^6 to 1×10^9) in accordance to EOS/ESD Association 7.1 Standard
- Can be ordered in Conductive (2.5×10^4 to 1×10^6) in accordance with NFPA 99, EOS/ESD 7.1 Standard
- Chemical Resistant
- Meets ANSI/ESD S20.20 and ANSI/ESD STM 97.1 program standards.

PRIMARY USES

- Electronics Manufacturing
- Clean Rooms
- Operating Rooms
- Hangars

PACKAGING AND COVERAGE

WH7000 Primer:

3.5 Gallon kit, covers approximately 700 square feet at 8 mils.
Kit consists of:

- 1 Container - Part A (pigmented resin)
- 1 Container - Part B (hardener)

ESD-20 Conductive Ground Plane (or Dissipative):

5 Gallon kit covers approximately 1,500 square feet at 5 mils.
Kit consists of:

- 1 Container - Part A (pigmented resin)
- 1 Container - Part B (hardener)

ESD-20 Top Coat:

4 Gallon kit covers approximately 900 square feet at 7 mils.
Kit consists of:

- 1 Container - Part A (pigmented resin)
- 1 Container - Part B (hardener)

TOP COAT COLORS:

Light Gray, Medium Gray, Light Blue, Medium Blue, Light Green, Medium Green.

PHYSICAL CHARACTERISTICS

Compressive Strength.....	6,748 PSI (ASTM C-579)
Hardness, Shore D.....	76-80 (ASTM D-2240)
Tensile Strength.....	4,109 PSI (34 MPa) (ASTM D-638)
Flexural Strength.....	7,131.03 PSI (59 MPa) (ASTM D-638)
Coefficient of Friction	0.51
Rate of Burning.....	Self Extinguishing (ASTM D-635)
Indentation @ 2,000 lbs.....	No indentation
Surface Abrasion.....	0.15 wear index
Water Absorption.....	0.027% (ASTM C-413)
Self Life.....	1 year
VOC Mixed (primer, ground plane, & top coat)	0 g/l

SURFACE PREPARATION:

Petra's ESD-20 should be applied to sound substrates that have been properly prepared and cleaned. Do not install below 65°F.

Mechanical scarification (Diamond Grind or Shot Blast) is recommended until a suitable profile is achieved. All dirt, oil, dust, foreign contaminants and laitance must be removed to assure a trouble free bond to the substrate.

A test should be made to determine that the concrete is dry and to ensure that hydrostatic pressure is at an acceptable level. Calcium chloride test kits are available for testing moisture levels (ASTM F 1869-04). This system is not warranted to adhere to substrates lacking an intact vapor barrier or with moisture emission levels greater than 3lbs. per 24 hours, per 1,000 s.f. or Relative Humidity readings in the slab above 85% RH.

INSTALLATION INSTRUCTIONS

Primer: Pre-mix Part A for 1 minute with a clean Jiffy Mixer. Pour entire contents of Part B into the Part A container and mix for 2.5 minutes, being careful not to whip air into the mix. Immediately pour entire contents onto the floor in a continuous ribbon. Use a flat squeegee to spread material in one direction at a rate of 200 sf/gal., then back roll with a 3/8" nap, lent -free, roller to remove any puddles or lines from squeegee. 18" rollers are recommended. Mix Ratio is 2.5A:1B.

Grounding Straps: Ground straps should be placed every 1,000 square feet or as needed over cured Primer prior to application of Ground Plane.

Mixing Ground Plane: Pre-mix Part A for 1 minute with a clean Jiffy Mixer. Next, pour entire contents of Part B into the Part A container and mix for 2.5 minutes, being careful not to whip air into the mix. The material should turn into a "molasses-like" epoxy. Immediately pour entire contents onto floor in a continuous ribbon. Use a firm flat squeegee to spread material at a rate of 300 sf/gal., then back roll with a 3/8" nap roller to remove any puddles or lines from squeegee. Do not mix more than can be applied within 25 minutes. Mix Ratio is 9A:1B.

Mixing Top Coat: Pre-mix Part A for 1 minute with a clean Jiffy Mixer. Next, pour entire contents of Part B into the Part A container and mix for 2.5 minutes, being careful not to whip air into the mix. Immediately pour entire contents onto floor in a continuous ribbon. Use a flat squeegee to spread material at a rate of 225 sf/gal., then back roll with a 3/8" nap roller to remove any puddles or lines from squeegee. For best color consistency "finish roll" the entire floor (in the same direction the floor was squeegeed), keeping closely behind each mix as it is applied. Be careful to not roll the epoxy after it has started to gel. Do not mix more than can be applied and finish rolled within 15 minutes. Mix Ratio is 3A:1B.

CURE TIME

Allow overnight cure between coats. Petra ESD-20 will harden to foot traffic in 18-24 hours at 75°F (24°C). Allow 7 days for full cure before taking electrical readings.

SAFETY

Read all installation instructions carefully before using this product. Safety Data Sheets are available upon request. Avoid contact with skin, use proper gloves. If eye contact occurs, flush with water and consult a physician immediately. Keep work areas well ventilated. Never seal a container of mixed part A and B, as the continuing exothermic reaction may cause container to explode.

NOTE:

Petra Coatings believes this information to be accurate at time of publication and useful for evaluation purposes. Petra makes no warranty, expressed or implied, based on this literature and assumes no responsibility for consequential or incidental damages in the use of the systems described, including any warranty of merchantability or fitness. Information contained here is for evaluation only. We further reserve the right to modify and change products or literature at any time and without prior notice. 2/01/2023

CLEANUP

Primer and Top Coat can be cleaned up with isopropyl alcohol, acetone, and other solvent cleaners. Cured epoxy bonds to most surfaces and is very difficult to remove. Clean all tools immediately after use before cured. Ground Plane tools can be cleaned with soap and water first, then isopropyl alcohol.

LIMITATIONS

- Slab on grade requires moisture barrier.
- Substrate temperature must be above 65° F.
- All new concrete must be cured for at least 30 days, and must be thoroughly dried prior to application.
- Physical properties are typical values, not specifications.

LIMITED WARRANTY

Petra Coatings LLC products are manufactured to be free of defects in material and workmanship in meeting the properties specified on its individual Product Data Sheets. Users and installers of Petra Coatings products are solely responsible for determining the suitability of the products for specific product applications. Petra Coatings makes no Warranty or Guarantee, express or implied, including warranties of fitness, design compatibility or merchantability, for any particular use and shall have no responsibility or liability, including direct, indirect or consequential damages, due to injury, delay or third party claims for installation or repair. Likewise, Petra Coatings assumes no liability of any nature for products that are adjusted in the field or that do not utilize all specified Petra Coatings components. Should any Petra Coatings product be proved to be defective within one year from the date of shipment, Petra Coatings will, at its sole discretion, either replace the material; issue a credit to the customer's account; or provide a cash refund for the initial, paid purchase price of the material. Potential claims regarding product quality must be received in writing by Petra Coatings within 30 days of the discovery of such potential defect. This Warranty is exclusive of all other warranties, expressed or implied, and may only be adjusted in writing, signed by an officer of Petra Coatings LLC.

Petra Coatings LLC
155 County Road 2691
Alvord, TX 76225
(940) 872-8832 Office
(940) 872-8833 Fax
www.PetraCoatings.com