



PETRAStat ESD
advanced coating systems



HIGH PERFORMANCE ELECTROSTATIC DISSIPATIVE COATING

GENERAL PRODUCT DESCRIPTION

PetraStat ESD is a two component epoxy, high performance electrically conductive floor coating system. PetraStat ESD is available in both ESD conductive and static dissipative systems. It can be applied as a 20 mil coating system or up to a 1/4" overlayment in conjunction with other Petra HB (high build) systems. The finish is smooth. The Petra ESD system is composed of three parts: A seal coat or overlayment of 100% solids epoxy, PetraStat ESD Primer, and PetraStat ESD topcoat. The PetraStat system yields years of beautiful, low maintenance, seamless, and ESD conductive or static dissipative floors. Advantages:

- Essentially odorless
- Anti-Spark
- VOC Compliant
- High color stability in an epoxy (cycloaliphatic)
- High gloss
- Withstands medium traffic (thin mil) up to heavy traffic (high build)

PRODUCT DATA

Volumetric Ratio:	3 to 1
Solids:	100%
Coverage:	200 S/F per gal. at 8 mils
Application Temperature:	65-90°F and 5° above the dew point
Thinning:	Not required
Pot Life:	10-15 minutes
Working time on floor:	15-25 minutes
Cure Time:	8 hours (walking) 24 hours (traffic)
Critical recoat time:	18 hours
Shelf life:	12 months

RESISTANCE

PetraStat ESD is available in two conductive ranges.
 PetraStat ESD SD: For applications requiring Static Dissipative range of 1 megohm to 1,000 megohms
 PetraStat ESD EC: For applications requiring electrically conductive or a lower resistance of 25,000 ohms to 1 megohm
 Tested in accordance with the EOS/ESD Association 7.1 Standard Characteristics of Floor Materials. Customized ranges available upon request.

PHYSICAL PROPERTIES

PROPERTY	VALUE	REFERENCE
Compressive Strength	6,000 psi	ASTM C 579
Flexural Strength	2,325 psi	ASTM D 790
Tensile Strength	2,000 psi	ASTM D 638
Bond to Concrete	350 psi concrete fails at this point	ASTM D 4541
Surface Abrasion	0.13 (Wear Index)	ASTM D 1044
Coefficient of Friction	0.5 Minimum	ASTM 2047
Flammability	Self-extinguishing	ASTM D 635
Hardness, Shore D	70-80	ASTM D 2240
Flash Point	>200°F	ASTM D 93

INDUSTRIAL APPLICATIONS

The uniqueness and universality of this system allows PetraStat ESD to be used in the following applications:

- Electronics
- Computer rooms
- Clean rooms
- Pyrotechnic
- Flammable Storage
- Munitions Manufacturing
- Spray booths

COLORS

PetraStat ESD is available in a variety of colors. Petra standard colors are: Black, white, light gray, medium gray, dark gray, and light beige. Other colors are available at an additional charge.

PETRASTAT ESD

CONCRETE PREPARATION

Before the coating is applied, the concrete must be:

- Clean-- Contaminants removed
- Profiled-- Surface etched
- Sound--Cracks repaired

Mechanical preparation is the preferred method of preparing concrete for coating application. Shot-blasting, diamond grinding, scarifying, and scabbling are all acceptable methods. The concrete profile should be approximately 40-60 grit sandpaper after preparation.

PATCHING

Voids, cracks, and imperfections will be seen in finished coating if the concrete is not patched correctly. Patch concrete with Petra-Patch. After the patching material has cured, diamond grind patch the concrete. If a non-Petra patching material is used, make sure that it is a two-part epoxy patch. Always test unproven products by applying patch material first, then Petra coating system next. Check to see if bonding is firm.

MIXING

The ratio of PetraStat ESD is 3 to 1. That is, three parts of A (resin), to one part of B (hardener). Generally, the mixed four gallons of PetraStat ESD is ideal for application. Mix the following with a drill and jiffy mixer.

1. Premix the Part A for one to two minutes in the partially filled five gallon bucket which then becomes the mixing bucket.
2. Add the one gallon of Part B into the Part A and mix for another two minutes. Scrape the sides of the bucket to insure complete mixing.
3. Immediately apply to the floor. PetraStat ESD in mass has a much shorter pot life of approximately 10-15 minutes.

PRODUCT LIMITATION

Ground level concrete slabs emit moisture vapor. The allowable moisture emissions for concrete is 3 lbs. / 1000 S/F over a twenty-four hour period. If moisture is above this level, then blistering and delamination of coating may occur. A calcium chloride test should be performed to determine concrete moisture level. If moisture levels exceed the 3 lb. limit, a concrete moisture vapor control system should be used first before applying coating system. Please contact Petra technical department for approved systems.

Coating systems are susceptible to cracking if the concrete moves or separates below the coating. Hence, joint and crack treatment should be reviewed prior to coating application. As a general rule, control joints (saw cuts) and random cracks should be saw cut or chased first then filled with Petra Patch or similar approved hard epoxy product. Construction joints (two slabs which meet and hence move) should be treated. After the coating has been applied and cured, saw cut through the coating over construction joints.

APPLICATION PROCESS

PetraStat ESD is formulated to be applied in one or two coats at 200 SF per gallon (8 mils each coat) over PetraStat ESD Primer. This is important in order to achieve the correct electrical readings.

1. It is always best to apply in descending temperatures to reduce the possibility of out gassing in the coating. Optimum ambient temperature should be between 65-90°F and five degrees above the dew point during application.
2. Mix four gallons of resin using above mixing instructions.
3. Apply approximately 200 S/F per gallon by immediately pouring out on surface in a ribbon, while walking and pouring at the same time until bucket is empty.
4. Using a window squeegee on a pole, pull PetraStat ESD over PetraStat ESD Primer.
5. Using a 3/8" non-shedding phenolic (plastic) core paint roller, roll coating forwards and backwards.
6. Lastly, backroll in the opposite direction from step 5.
7. When cured, repeat for second coat (16 mils) if desired.

MAINTANANCE

PetraStat ESD systems are easily maintained without the requirement of waxing or buffing. Generally regular dust mopping is standard. Next, damp mopping with a safe neutral pH cleaner will remove most dirt. Black marks are best removed by a d-Limonene, citrus based cleaner. If floor machines are used, only use white, red, or tan pads. Other pads are too abrasive and can dull the floor.

CLEANUP

PetraStat ESD, while in an unreacted state, may be cleaned up with water and degreaser. Isopropyl alcohol or acetone may be needed once the resin begins hardening. Lastly, a stronger solvent may be required if the resin is nearly set up.

WARRANTY

Petra Polymers products are warranted for one year after date of application. Please refer to the Petra Polymer's Limited Material Warranty for additional clarification.

SAFETY

Consult PetraStat ESD material safety data sheet. Avoid PetraStat ESD contact with eyes and skin. Some individuals may be allergic to epoxy. Protective gloves and clothing are recommended.

Information expressed in this data sheet is correct to the best of our knowledge. The technical data sheet does not constitute a warranty, expressed or implied as to the performance of this product. The use and application of this product is beyond our control. Warranty and liability therefore is limited to the replacement only for defective materials. Technical information is subjected to change without cause.

