

## ACEFLOOR - ESD

### Static - Control Heavy Duty Epoxy Flooring System



Creating Innovative  
Green-Chemistry for Sustainable Future



### PRODUCT DESCRIPTION

Acefloor ESD is an ultra-high solids bis-A epoxy floor coating designed to provide electrostatic control properties to various surfaces including concrete or other nonconductive substrates. The use of a conductive primer will transmit conductive readings through ESD (Electrostatic Dissipative) Epoxy Coating. It provides excellent bond to concrete as well as high impact and wear.

### ADVANTAGES

- Consistent Electrical Resistance Ratings When Tested at 10-500 Volts.
- Easy Application
- Available in Static Dissipative Range of 1,000,000 to 10,000,000 ohms per EOS/ESD Standards.
- Electrostatic Dissipative (ESD) / Conductive Epoxy Floor Coating
- Good Abrasion Resistance.
- Easy to Clean.

### USES

To provide a hard wearing, seamless, antistatic floor with an electrical resistance in the range  $1 \times 10^{6-7}$  ohms  
Specific applications include:

- Electronics manufacture and assembly
- Clean Rooms, Process Area, and Solvent handling/process areas in pharmaceuticals units
- Computer rooms

### PACK SIZE

12 Months if stored in cool & dry place in original container

### DIRECTIONS FOR USE:

#### Substrate Requirements:

- Test for moisture vapor transmission using anhydrous calcium chloride test as per ASTM F-1869 and/or situ RH probe testing per ASTM F-2107. Maximum MVT is 3 pounds per 1000 SF per 24-hour period.
- Substrates Temperatures must be a minimum of 55-60°F. and a maximum of 85°F
- Relative Humidity (RH) should be between 30% and 85%. Substrate must be 5°F above the measured dew point.
- Substrate must be clean and free of Dirt, waxes, curing agents and any other foreign material that will interfere with bonding.

#### Surface preparation:

The long-term durability of the applied Acefloor ESD - 701 is dependent on the adhesive bond achieved between the flooring material and substrate. It is most important therefore, that substrate surfaces are correctly prepared prior to application.

New concrete or cementitious substrates should have been placed at least 28 days and have a moisture content of less than 5% before topping with Acefloor ESD - 701.

Before application, the surface to be coated, should be free from loose particles, rust, oils, grease, or earlier coatings and should be thoroughly dry.

After surface is dry, all repair work like sealing of joints, crack filling of cavities and crevices should be carried out.

If the surface is Tremix or smooth surface then Shot Blasting is carried out to make the surface rough in order to enhance the bonding of the primer.

Concrete defects such as voids, bug holes, excess porosity, and physical and chemical damage are usually filled or repaired prior to the installation of the F/C system. (Materials such as slurries, mortars, and polymer concrete are used to level, smooth and patch concrete surfaces.

The laitance (A thin, weak, brittle layer of cement and aggregate on concrete surface) on in-situ bases and any surface sealer or curing membrane should be entirely removed by suitable mechanized equipment, e.g. shot-blasting, panning or grinding, to expose cleanly the coarse aggregate.

#### Priming:

Mix Part A and Part B of Acefloor 401 with Electric Stirrer. Once parts A & B have been thoroughly mixed, the product may be thinned to aid application. Apply the primer coat by brush and then roll the centre with a short nap roller. Allow a drying time of at least 4 hours before applying basecoat. If you intend to install epoxy corner coving, this should be done before commencing the next step.

#### Basecoat or Screeding:

The base coat used is usually Acefloor 501. Mix Part A, Part B & Part C of the Acefloor 501 in a clean bucket with Electric stirrer according to the instructions on the technical data sheet.

Starting at the far corner, apply the basecoat by trowel and roller into the wet product until all the basecoat is covered, except at the leading edge.

#### Copper Tape Grid:

Copper Tape is an electrically conductive copper foil tape backed with a robust adhesive that is covered with an easy to remove liner making the application of this material easy, fast and accurate. Clean the substrate to remove dirt, oil and products that may interfere with the adhesive. Mark the area where the grid will be required using a pencil or chalk line. Remove the liner from the tape and press it down on the substrate next to the marking. For optimum conductivity center punch the tape if it crosses another run.

### Conductive Primer:

Acefloor 402 ESD is a solvent free black two-pack low viscosity conductive primer based on Water base Epoxy. It is used prior to application of Top coat (Acefloor ESD 701)

### Mixing and Application:

1. Pack components are pre-weighed for optimum performance. Never split packs.
2. Empty contents of Base into a mixing container and pre-mix to assure the suspension of solids.
3. Add Pigment, Filler, Curing Agent respectively and continue to mix to a uniform consistency for 1-2 minutes.
4. Mix with slow speed drill and helical spinner head for 2 minutes.
5. Spread the mixture on the floor immediately to the required thickness by means of rollers and serrated trowels.  
The floor should be rolled by a spike roller to remove trapped air.

### METHOD OF APPLICATION:

Topcoat is normally spread with a trowel and back-rolled with a 3/8" medium nap roller. Care should be taken to minimize the entrapment of air caused by over rolling.

### Application System/Components:

#### 1) Primer :

- a) Acefloor 401 (Primer) - Part A (Resin)
- b) Acefloor 401 (Primer) - Part B (Hardener)
- c) Acefloor 401 (Primer) - Part C (Filler)
- d) Acefloor 401 (Primer) - Part D (Colour)

#### 2) Screed :

- a) Acefloor 501 (Screed) - Part A (Resin)
- b) Acefloor 501 (Screed) - Part B (Hardener)

#### 3) ESD Primer :

- a) Acefloor 402 ESD (ESD Primer) - Part A (Resin)
- b) Acefloor 402 ESD (ESD Primer) - Part B (Hardener)

#### 4) Copper Strips

#### 5) ESD Top Coat :

- a) Acefloor 701 ESD (Top Coat) - Part A (Resin)
- b) Acefloor 701 ESD (Top Coat) - Part B (Hardener)
- c) Acefloor 701 ESD (Top Coat) - Part C (Filler)
- d) Acefloor 701 ESD (Top Coat) - Part D (Colour)

### MECHANICAL PROPERTEIS

|                                   |         |
|-----------------------------------|---------|
| Compressive Strength (ASTM C 579) | 41 MPa  |
| Flexural Strength (ASTM C 580)    | 9.5 MPa |
| Tensile Strength (ASTM C 307)     | 7.5 MPa |

### TECHNICAL PROPERTIES

Solvent free epoxy based conductive epoxy floor coating kit for 1mm thickness

|                                |                                   |
|--------------------------------|-----------------------------------|
| Colour                         | Range                             |
| Gloss                          | Glossy                            |
| Recommended DFT/ Coat          | 1 mm                              |
| Surface Resistance (ASTM F150) | $1 \times 10^{6-7}$ ohms          |
| Theoretical Covering Capacity  | 1.65 kg/m <sup>2</sup> @ 1 mm DFT |
| Drying Time Surface Dry        | 4 hours                           |
| Hard Dry                       | 24 hours                          |
| Full Cure                      | 7 days                            |
| Mixing Ratio                   | Pre weighed Kit                   |
| Pot life                       | 30 Minutes                        |

### STORAGE AND HANDLING

The product should be stored in accordance with national regulations. It should be kept in a cool, well-ventilated area, away from heat, direct sunlight, sparks and children. Handle with care. Mix resin and hardener as per the recommended ratio. Use the mix solution within the pot life time.


### CAUTION

Observe reasonable care and employ ordinary hygienic principles such as washing the hands with soap and water before eating or smoking. It is recommended to wear gloves, goggles and nose masks while application. In case of splashes on the skin, dampen the cloth with thinner and wipe the hands with the cloth. Wash then with soap and water. Dried film is nontoxic. In case of contact with eyes, rinse with plenty of water and seek medical advice. In case of continuous exposure to vapour, the applicator should be immediately moved to get fresh air.

### COVERAGE

Approximately 5 sft per 1 kg for 2 mm bed thickness. Coverage will vary depending on surface undulation and application variances.

### CUSTOMER SERVICE

For any query related to product availability, cost, coverage, applicators, installation instructions, problems and trouble shooting, contact customer service executive on our  customer help line +91 963 260 5577 or write email to [customercare@acebond.in](mailto:customercare@acebond.in)

For product or other information, please write us to [info@acebond.in](mailto:info@acebond.in) Visit us at [www.acebond.in](http://www.acebond.in)

### WARRANTY

Accrete Adhesions India Pvt Ltd warrants to the original purchaser that its product shall be free from defects in material for a period of one year from the manufacturing of the product. Our sole liability under this warranty shall be limited to the replacement of our purchased product if proved defective under normal handling as stated in the TDS. This warranty will not extend to any other product or items which were handled along with our product. This warranty or any other legal issues or claims are subject to Kundapura jurisdiction only.

#### DECLARATION

The information and recommendations contained herein are based upon data believed to be correct; however, no guarantee or warranty of any kind expressed or implied is made with respect to the information provided since conditions of use, application method and surface preparation at site are beyond our control. All legal issues are subject to Kundapura jurisdiction only.

NB: Technology may change with time necessitating changes to this Technical Data Sheet (TDS). It is the responsibility of the user to ensure that the latest TDS is being used.

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