

# SOLIDFLOW SL ESD

## 1.5 mm Antistatic Epoxy Floor Coating



A high performance, heavy duty, solvent-free, self-leveling antistatic epoxy floor coating that forms part of a flooring system that meets the requirements of BS: 2050-1978.

The anti-static flooring safeguards both personnel and sensitive electronic equipment from electrostatic discharge (ESD). Solidflow SL ESD exhibits superior abrasion and chemical resistance on concrete floors and creates a hygienic, smooth and attractive finish ideal for dry process areas in the packaging, electronic, automotive, food and pharmaceutical industries.

### UNIQUE PRODUCT BENEFITS

- High chemical resistance.
- High abrasion resistance.
- Electrostatic dissipative.  $5 \times 10^6$  to  $10^8 \Omega$  BS: 2050-1978
- Rapid installation with seamless finish.
- Easy to clean and maintain hygienic environment.
- Antistatic nature reduces dust adhesion.
- Taint free to sensitive food consumables.

### TECHNICAL DETAILS

Compressive Strength	>55 MPa	BS6319
Tensile Strength	>15 MPa	
Flexural Strength	>30 MPa	
Concrete Adhesion	>1.5 MPa (Concrete failure)	ASTM D7234
Impact Resistance	1 kg >1.8 m 2 kg >1.5 m	ISO6272-1: 2011
Hardness	80	Shore D
Slip Resistance	Dry > 70 Wet > 25	TRRL Pendulum Slip Test
Water Uptake (Permeability)	Nil	Karsten Test
Antistatic Performance	$5 \times 10^4$ to $5 \times 10^8 \Omega$	BS: 2050-1978
Solids Content	100%	
Pot Life	30 minutes @ 20°C	
Light Traffic	18 hrs	
Heavy Traffic	24 to 48 hrs	
Chemical Resistance	Refer to chemical chart	
Colour	Standard Colours	
Kit Yield	20 L	
Coverage @1.5 mm	13.3 m <sup>2</sup> per kit	
Application Temperature	15 to 28°C	
Service Temp	50°C Max Dry	

### PACKAGING

Part 1	15 L (Pigmented Epoxy)
Part 2	5 L (Hardner)
Part 3	24 g (Antistatic Fibre)

### SYSTEM PRODUCT REQUIREMENTS

Primer:	Solidkote UP Primer
Earth:	Copper grid (10mm tape)
Middle layer:	Solidkote WB ESD
Topcoat:	Solidflow SL ESD

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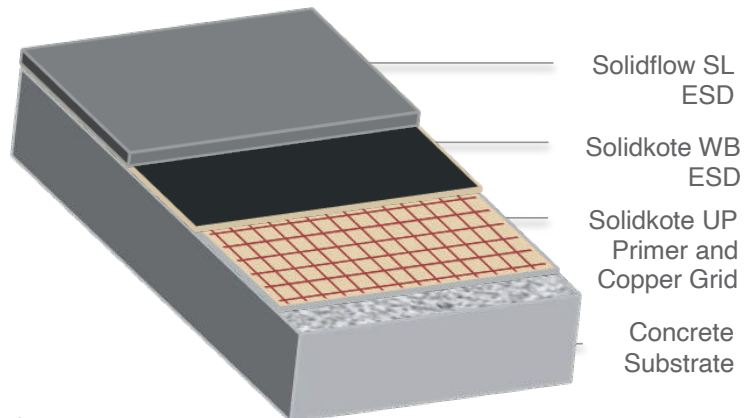
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## APPLICATIONS:

- Solvent storage warehouse floors
- Laboratories
- Electronic (Clean rooms)
- Automotive Showrooms
- Sports Floors
- Packaging warehouses
- Medium to heavy duty traffic environments where durability is required



## SUBSTRATE REQUIREMENTS

Concrete substrates must have a minimum compressive strength of 20 to 25 MPa, a minimum tensile pull-off strength of 1.5 MPa and be free of oil, fat, grease, dust, and loose friable materials. The moisture content should be less than 5% and free from rising damp. The surface finish of the concrete should be class 2 (AS 3610).

Note: Any filling of blowholes/voids and surface levelling of substrate can be achieved using appropriate products within Technical Finishes Construction Range (please speak to one of our technical sales representatives).

## PREPARATION

Remove all previous coatings, unbonded concrete and laitance mechanically through diamond grinding, abrasive blasting or scarifying to obtain a sound and porous surface (sandpaper texture). Sweep dust and loose debris followed by vacuuming, to obtain a dry and dust-free surface.

## PRIMING

Ensure application conditions of 15 to 28°C and that the concrete moisture content is below 5%.

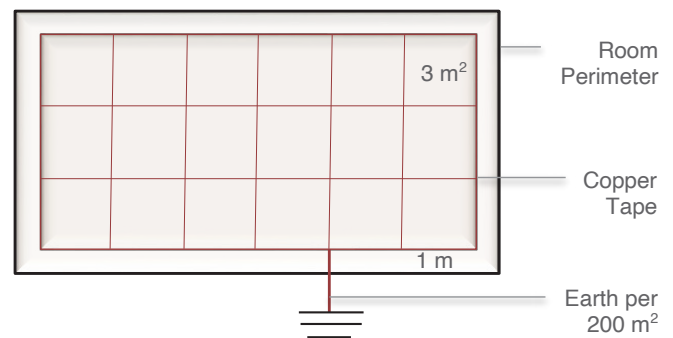
Prime with Solidkote UP Primer.

Allow primer to cure for at least 8 hours prior to installation of copper tape and subsequent application of Solidkote WB ESD, with the Solidkote UP Primer over coating time being a maximum of 18 hours. The Solidkote UP Primer must show a visibly complete seal of the substrate.

Note: Solidkote STP Primer is recommended for difficult surfaces (persisting contamination).

## EARTHING

Apply copper tape grid on cured Solidkote UP Primed surface as indicated in the diagram below.



### Copper Tape Grid

Lay the copper grid 1 m from the room perimeter. Each copper tape forming the grid should be placed a maximum of 3 m apart. Hence, the copper tape forms a grid with squares with surface area of 3 m<sup>2</sup>, as seen in the figure above.

### Earth Connection

Ensure there is an earth for every 200 m<sup>2</sup> of surface (the copper grid should be secured to a main earthing frame). A multi-strand piece of copper wire is connected to the main earthing frame at one end and spread out like a fan against the surface of the floor and taped down with the copper tape that forms part of the copper grid). The self-adhesive copper tape should be fully adhered to primed surface (apply pressure).

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## Joists

Allow the copper tape to fold down into joints, across the joint line, to bridge any potential electrostatic dissipative breaks in the copper grid across the floor. Apply a bondbreaker to the copper tape within the joint to form a slip joint. Consequent filling of joints can be achieved using appropriate products within Technical Finishes Construction Range (please speak to one of our technical sales representatives).

In the event that areas separated by expansion joints cannot be bridged by copper tape, they should be treated as isolated areas and be individually earthed.

## INSTALLATION:

Ensure application conditions of 15 to 28°C. Ensure adequate lighting to achieve an even and level spread. Installation should not be attempted unless application team is fully trained.

### Solidkote WB ESD

Apply Solidkote WB ESD as per Technical Data Sheet. Measure the electrical resistance across the prepared floor, and ensure that it is within the required range, prior to the application of Solidflow SL ESD.

### Solidflow SL ESD

Mix Part 1 thoroughly with a mechanical mixer.

Add Part 3 (Fibres) into Part 1 and stir using a mechanical mixer for 2 minutes or until fibres are thoroughly mixed in.

Add Part 2 into the mixing vessel and stir using a mechanical mixer for 3 minutes. Ensure the mixing paddle scrapes the sides of the mixing vessel.

Mix for a further 2 minutes. The mix should not be kept in the container as it will start to cure rapidly.

Pour out the mix into the demarcated area in a long ribbon and spread the mix using a notched rake to obtain the

correct coverage and smooth off with the flat edge of the trowel. A steel hand trowel may be used on the edges to assist with placing in smaller areas. After 5 to 10 minutes spike roll to assist with leveling and de-aeration. Ensure that the spike roller is rolled in a uniform direction.

The total time of mixing and placing should be 10 to 15 minutes. Once the first mix has been placed, the following mixes should follow one after the other until the entire floor is completely coated in one operation. Doorways and separate rooms may be taped off and coated at another time. At this stage, do not spike roll again as this can lead to slight colour variations. Ensure that airborne contamination does not settle on the surface during the curing period.

## MAINTENANCE

Regular cleaning extends the service life of the Solidflow SL ESD system. Maintenance is to be carried out using Liquid Action which complies with SANS 1344 Medium Duty Solvent Detergent (2112/P3325/10/ID).

## HEALTH AND SAFETY

Please read Safety Data Sheet and specific health and safety data for this product provided in compliance with the requirements of OHSA No.85 of 1993. The finished system is not hazardous to health or the environment.

## WARRANTY

Technical Finishes products are manufactured under high quality standards and are warranted against defective materials and are sold subject to standard Terms and Conditions of Sale, copies of which can be obtained upon request. Technical Finishes deals with approved applicators and carry a back to back warranty with these clients. Technical Finishes cannot be held responsible for the workmanship in surface preparation and application of our products, it is understood that the approved contractor will guarantee such workmanship and application. It is vital that the application is done in accordance to our specification.

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