

Strongcoat Conductive EF1000

Solvent-free, anti-static (ESD) epoxy floor coating



DESCRIPTION

Strongcoat Conductive EF1000 is a solvent-free Anti-static (ESD) floor coating specially designed to provide electrostatic control properties to a variety of substrates in wide range of applications.

Strongcoat Conductive EF1000 comprises of an epoxy primer, conductive base coat and 600 micron flow applied topcoat.

Strongcoat Conductive EF1000 can be used in conjunction with "Strongcoat Conductive system" from DCP as a repair coating in areas where improper finishing or unacceptable electrical resistance were observed.

APPLICATIONS

- » Electronic manufacturing facilities.
- » Hospital operating theatres.
- » Hazardous dust and chemical environments.
- » Data processing rooms.
- » Military and aerospace facilities.
- » As a repair coating in areas where improper finishing or unacceptable electrical resistance were observed in "Strongcoat Conductive system" from DCP.

ADVANTAGES

- » Easily applied repair coating to restore the electrical and aesthetic appearance of ESD floorings.
- » Provides a smooth finish.
- » Provides a hard wearing surface.
- » High chemical resistance.

METHOD OF USE

When used as electrostatic discharge (ESD) flooring system:

SURFACE PREPARATION

The substrate must be clean, dry, even, dense and free from oil, grease, dust and other contaminations. A clean surface will ensure maximum adhesion between the substrate and the coating.

Concrete floors must have a minimum compressive strength of 25 N/mm² and a maximum concrete relative humidity of 75% (max. moisture content of 4%), relative humidity can be measured by using hygrometers. Concrete relative humidity should be less than 75% for concrete of 28 days old or more.

TECHNICAL PROPERTIES FOR STRONGCOAT CONDUCTIVE EF1000:

Colour:	Variable
Mixed density:	1.45 ± 0.10 g/cm ³
Compressive strength: BS 6319-2	≥ 70 MPa @ 7 days
Flexural strength: EN 13892-2	≥ 30 MPa @ 7 days
Tensile strength: BS 6319-7	≥ 12 MPa @ 7 days
Pot life:	40 - 60 min @ 25°C

TECHNICAL PROPERTIES FOR STRONGCOAT BASE COAT:

Colour:	Black
Mixed density:	1.05 ± 0.05 g/cm ³
Pot life:	1 - 2 hr @ 25°C
Tack free time:	2 - 3 hr @ 25°C

ELECTRIAL RESISTANCE:

Typical electrical resistance*:	
ASTM F150	
Surface to surface	2.5 x 10 ⁴ - 1 x 10 ⁶ ohms
Surface to ground	2.5 x 10 ⁴ - 1 x 10 ⁶ ohms

** The above results for electrical resistance are when Strongcoat Conductive EF1000 applied over Strongcoat Conductive Basecoat and copper tape at 600 microns per the application instruction stated in the datasheet.*

Unsound layers and contaminated concrete surfaces must be prepared using mechanical surface removing equipment. In case of areas deeply contaminated by oil or grease, such areas should be treated with hot compressed air.

PRIMING

Concrete substrates should be primed with Strongcoat Primer. The primer should be allowed to cure for 24 hours. Use lambs wool roller to apply the primer. More than one coat may be required for highly porous or textured surfaces.

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Depending on the conductivity needed, self-adhesive copper tape can be used. Apply the copper tape firmly to the cured Strongcoat Primer so that no part of the floor is more than 2 meters away from the copper tape.

Make sure that the perimeter tape is overlapped and applied at 300 - 500 mm from the edge of the wall. Extend the copper tape to adequate number of earthing points depending on the floor area and condition.

Notes:

- » *For the best results, always use a minimum of 2 earthing points even in small installation.*
- » *It is possible to make a floor that removes static charge without using copper tape; however, it will not be as conductive as a system that uses copper tape.*

Strongcoat Conductive Base Coat

The Basecoat should be mixed with a slow speed drill and suitable helix type paddle. The entire contents of the base should be added to the hardener and mixed for at least 3 minutes.

Frequently scrape the sides and bottom of the container. When mixed, the Basecoat should be applied to the primed concrete using a proper short hair roller at a rate of 4.5 m²/kg and allowed to cure for 24 hours at normal conditions before being over coated with Strongcoat Conductive EF1000 top coat.

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Transfer the entire contents of the resin, hardener and colour pack (if available) into a separate mixing container and mix them using a jiffy type mixer for 2 minutes until a uniform consistency achieved. Transfer the entire contents of the mixture into a creteangel-type mixer, and start mixing while adding the filler part gradually for two minutes until a uniform lumps-free consistency is active.

Once mixed, strongcoat conductive EF1000 should be laid on the applied Strongcoat Conductive Base Coat using a pin leveller or v-shape notched trowel in one uniform direction at a coverage rate of 0.87 kg/m² to achieve 600 microns thickness. Good lighting conditions assist in even application and spotting the poorly covered areas.

After around 10 minutes of laying the Strongcoat Conductive EF1000, it should be rolled using a spike roller at the right angle to the direction of laying. After further 15 - 20 minutes, a second spike rolling should be done in a perpendicular direction to the first direction.

When used as a repair coating with “Strongcoat Conductive system” from DCP:

The areas where improper finishing and/or unacceptable electrical resistance measurement should be marked. Make sure that all these areas are clean and free from any oil, grease or contaminants.

Over these areas, re-apply the copper tape and Strongcoat Conductive Basecoat, refer to Strongcoat Conductive datasheet for more details about the application of copper tape and the basecoat.

Upon the drying time of Strongcoat Conductive Basecoat (typically 24 hours at normal conditions), Strongcoat Conductive EF1000 can be applied.

After around 10 minutes of laying the Strongcoat Conductive EF1000, it should be rolled using a spike roller at the right angle to the direction of laying. After further 15 - 20 minutes, a second spike rolling should be done in a perpendicular direction to the first direction.

For more information about the installation and verification of Strongcoat Conductive EF1000 refer to the Strongcoat Conductive Repair Procedure document or contact DCP's Technical Department

PACKAGING

Strongcoat Primer: 5 kg packs.
Strongcoat Conductive Base Coat: 5 kg packs.
Strongcoat Conductive EF1000 is available in 11.4 kg pack.

COVERAGE

Strongcoat Primer: 5 m²/kg.
Strongcoat Conductive Basecoat: 4.5 m²/kg.
Strongcoat Conductive EF1000: 1.15 m²/kg.

Actual coverage can vary depending on the substrate conditions.

STORAGE

Strongcoat Conductive EF1000 has a shelf life of 12 months from date of manufacturing if stored at temperatures between 5°C and 30°C.

If these conditions are exceeded, DCP Technical Department should be contacted for advice.