Strongcoat Conductive

Conductive floor with resistance between 5x10⁴ and 1x10⁶ ohms

DESCRIPTION

Strongcoat Conductive is a flow-applied 2 mm thick epoxy resin floor topping with conductive properties. The system comprises of an epoxy primer, conductive epoxy base and an epoxy top coat.

APPLICATIONS

Strongcoat Conductive has a resistance between 5 x 10^4 and 1 x 10^6 ohms. Strongcoat Conductive is suitable for use in areas where a static conductive floor is required, such as:

- Electronic manufacturing facilities.
- Hospital operation theatres.
- Hazardous dust and chemical environments.

ADVANTAGES

- Provide a conductive floor for static electricity to pass through to earth controlling static electricity.
- Alternative smooth finish.
- Hard wearing surface that can be subjected to heavy foot traffic and forklift traffic.
- Chemical resistant.

METHOD OF USE

SUBSTRATE 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 80% (max. moisture content of 4%), relative humidity can be measured by using hygrometers.

Concrete relative humidity should be less than 80% for concrete of 28 days old or more.

SURFACE PREPARATION

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.

ELECTRICAL PROPERTIES:	
Surface resistance: ASTM F150-78	5 x 10^4 to 1 x 10^6 ohms
Bulk resistance: DIN 51953	5 x 10^4 to 1 x 10^6 ohms
Charge decay: (Fed. Spec. 101C Method 4046)	5000v to zero in less than 0.1 sec
PHYSICAL PROPERTIES FOR TOP COAT:	
Shore D hardness: ASTM D2240	85 ± 5 @ 14 days
Compressive strength: BS 6319, Part 2:1983	≥ 70 MPa @ 7 days
Flexural strength: BS 6319, Part 3:1990	≥ 27 MPa @ 7 days
Tensile strength: BS 6319, Part 7:1985	≥ 10 MPa @ 7 days
Cure time:	
Foot traffic	24 hr @ 25°C
Vehicular traffic	48 hr @ 25°C
Mixed density:	1.7 ± 0.10 g/cm³
Pot life:	40 - 60 min @ 25°C
VOC:	< 20 g/ltr
PHYSICAL PROPERTIES FOR BASE COAT:	
Colour:	Black
Mixed density:	1.05 ± 0.05 g/cm³
Pot life:	1 - 2 hr @ 25°C
Tack free time:	2 - 3 hr @ 25°C

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.

Self-adhesive copper tape should be firmly applied to the cured Strongcoat Primer so that no part of the floor is more than 2 meters away from the copper tape.

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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.

Note: For the best results, always use a minimum of 2 earthing points even in small installation.

STRONGCOAT CONDUCTIVE BASE COAT

Prior to mixing, stir the two components of Strongcoat Conductive base coat (base and hardener).
The entire contents of the hardener container should be poured into the hardener container and the two materials mixed thoroughly for at least 3 minutes till achieving a uniform black colour.

The use of a heavy duty slow speed drill fitted with a mixing paddle is recommended. Application is done by using suitable plastic broom.

STRONGCOAT CONDUCTIVE TOP COAT

Taking care to ensure that the bottom and sides are thoroughly scraped, transfer the entire contents of the resin and hardener and colour pack into a separate mixing container.

Using a jiffy-type mixer attached to a slow-running electric drill, mix for approximately for 2 minutes. Once the Strongcoat Conductive hardener, resin and colour pack have been mixed, transfer the entire contents into a Casco or Creteangel-type mixer, taking care to ensure that the bottom and sides are thoroughly scrapped.

Start the mixer and transfer to it the entire contents of the Strongcoat Conductive filler container, taking care to ensure that these are completely dry and lump-free. Continue mixing for approximately 2 minutes.

Once mixing is complete, transfer the mixed materials to the prime surface at the required thickness by rack.

Care should be taken when joining the lanes, to achieve a smooth connection. It is recommended to mask off edges with tape which is then removed while product is still wet.

While still wet, thoroughly spike roll the product.

PACKAGING

Strongcoat Primer: 5 kg packs.
Strongcoat Conductive Top Coat: 15 kg packs.
Strongcoat Conductive Basecoat: 5 kg packs.

CHEMICAL RESISTANCE

Occassional spillage after full cure (7 days @ 25°C)

Lactic Acid 10%	R
Oleic Acid (sat.)	R
Citric Acid 25%	R
Vinegar 10%	R
Sodium Hydroxide 50%	R
Ammonia Solution 10%	R
Sodium Chloride (sat.)	R
Water	R
Chlorinated Water	R
Dead Sea Water	R
White Spirit	R
Xylene	R
Acetone	R
Benzyl Alcohol	R
Brake Fluid	R
Diesel	R
Kerosene	R
Sulphuric Acid 25%	R
Phosphoric Acid 20%	RS + SS
Hydrochloric Acid 36%	RS + SS
Nitric Acid 10%	RS

R: Resistant
RS: Resistant with slight discoloration
SS: Slight softining

COVERAGE

Strongcoat Primer: 5 m²/kg.
Strongcoat Conductive Top Coat: 3.4 kg/m² @ 2 mm thickness.
Strongcoat Conductive Basecoat: 4.5 m²/kg.
Actual coverage can vary depending on the substrate conditions.

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STORAGE

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

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

CAUTIONS

HEALTH AND SAFETY

Strongcoat Conductive and Base should not come into contact with skin and eyes.
In case of contact with eyes wash immediately with plenty of water and seek medical advise promptly.

For further information refer to the Material Safety Data Sheet.

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- Adhesives.
- Tile adhesives and grouts.
- Building products.
- Structural strengthening.

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