BEST CONSTRUCTION CHEMICALS
Stick with Best

BESTCOAT ESD

Epoxy Based Conductive Self Levelling Flooring System

DESCRIPTION:

BESTCOAT ESD is a self-levelling, conductive epoxy flooring system. It is designed to comply with variety of electrical resistance requirements. It eliminates the potential build-up of static electric charge.

- Excellent mechanical strength & properties.
- Protects sensitive electronic devices by dissipating static charge.
- Eliminate garbage values recorded by sensitive electronic instruments monitoring vital parameters.
- Good adhesion to non-porous substrates.
- Easy cleaning & maintenance.
- Good resistance against diluted acids, alkalis, oils, lubricants etc.
  Fleets BS2050, ANSI/ESD2020, ASTt1 F150 conductive, EC 61340-4-1 and IEC 61340-4-5.

RECOMMENDED USES:

- Electronic components manufacturing.
- Hospital operation theaters and laboratories.
- Industrial paint shops.
- Aerospace and defense industry.
- IT server & data storage rooms.
- Telecommunication control rooms.

TECHNICAL DATA

Type			BESTANTI_STATIC ESD
Colour		RAL	Colour on request
Abrasion resistance (ASTM C50 1-84)	750g Load/500 cycle	mg/cycle	23
Density (23°C/50% rel. Humidity)		Kg/L	1.80 ± 0.1
Compressive strength (14 days) (ASTM C 579-93)	25°C	N/mm2	60
Flexural strength (BS 6319 Part 3)	25°C	N/mm2	40
Tensile strength (BS 63 19 Part 7)	25°C	N/mm2	25
Bond Strength		Mpa	3.2
Curing time Accessible	25°C	HOUR	7-11
Full load able	25°C	DAY	05
Min. Flooring Thickness		MM	2
Adhesive tensile strength			Concrete failer
SHORE A/SHORE D		D	82
Electrical Resistance		ASTM F150 BS 2050	2.5x104 - 1x106 5.0x104 – 1x108
Body Voltage Generation		IEC 61340-4-4 & ANSI/ESD STM 97.1/97.2	<100V
Surface Resistance		Ω	6.9x108
Shock Resistance			1000 steel ball, Height 50cm, Coating without crack and spelling
Consumption			163g/sft/mm

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IMPORTANT INFORMATION:

Supplied in: 20 Kg units. Others on request.

Dry, frost free area. Out of direct sunlight.

Shelf life: 12 months.

Hazard Class: No dangerous goods.

Consult MSDS for details.

Note:

Electrostatic flooring is earthed while antistatic flooring is not earthed. In electrostatic flooring a copper strip network is part of the system and the whole system is earthed through this network

Products included in this system

- Primer
- Levelling layer (optional)
- Copper tape (Conductive grid of 12 mm wide copper tape)
- Conductive primer
- Conductive top layer

SURFACE PREPARATION:

Anything that can impair adhesion must be removed including any grease, oil, dust, curing compounds or any previous coating using grit ballasting, milling or grinding. technical wire brush can be used for small areas. The aggregate must be exposed and any repair must be done prior to application using Vertex epoxy repair system. The substrate temperature should be +3°C above dew point for application.

PRIMER:

Apply the primer using a brush or roller. If the primer is left for more than 24 hours then re- apply a thin coat.

LEVELLING LAYER:

A levelling layer may be applied, in case the substrate level is uneven. A levelling floor is important for the dissipation of electric charge. Standard self-level epoxy floor such as BESTCOAT SL-40 may be used up to the thickness level required to ensure that the floor is even.
Pour the Part B into the Part A and mix using a slow speed mixer (300-600 RPM), then pour the aggregates (Part C) in the mixture until homogenous. Make sure the material at the bottom and sides of the container is well mixed.
Apply the mixed material using a pin screed, notched trowel or steel float and spread to the required level. Once appropriately levelled, the material should be rolled with a spiked roller to release entrapped air and remove trowel marks. Rolling should be continued until all air entrapped is released.

CONDUCTIVE TAPE:

A network of self-adhesive, conductive copper tape is always recommended for flooring systems. The copper tape must be applied directly onto the cured epoxy primer (or levelling layer, if applied), with a maximum distance of 1 meter from the perimeter of the application. Further strips of tape should be applied within this area every 3 meters. Special attention should be paid to tape areas passing over expansion or bay joints to ensure permanent electrical continuity. For floor area less than 100 SQL there should be 2 earthing points and 1 extra point for every 100 SQM area.

CONDUCTIVE PRIMER:

Apply the mixed material using a brush, roller or squeegee. Material temperature should be between 10°C to 35°C.

TOP LAYER:

Pour the Part B into the Part A and mix using a slow speed mixer (300-600 RPf1), then pour the aggregate in the mixture until homogenous. Make sure the material at the bottom and sides of the container are well mixed. Over-mixing will lead to increased resistance due to carbon fiber fillers addition and the floor will no longer comply with the specifications for anti- static floor in ASTM F150, BS: 2050 or DINEN : 1081.
Apply the mixed material using a pin screed, notched trowel or steel float and spread to the required level. Once appropriately levelled, the material should be rolled with a spiked roller to release entrapped air and remove trowel marks. Rolling should be continued until all air entrapped is released.
The applicator should always wear spiked shoes when walking on the material. Rolling should stop before the material starts to gel.

CURING:

The curing of reactive polymers is affected in particular by the ambient temperature and sub- surface's temperature. Low temperatures slow the polymer's chemical reaction prolonging time for second coat and vice versa. Premature exposure to dampness can cause surface bubbles