CONIFLOOR IPS AS ESD – System Set Up

Antistatic Epoxy, Indoor Flooring System with a smooth surface, meets the requirement of (EN 1081) with silk-mat pigmented sealing lacquer for ESD-protection zones

Fields of application production areas, laboratories, filling station, microchip production (where ESD- protection is required)

System data

		Product	Consumption	Application	Remarks
Primer	concrete cement screed	**CONIFLOOR 110**	0.3 – 0.5 kg/m²	roll / brush-in	moisture level of concrete ≤ 4%
Scratch coat	optional	**CONIFLOOR 110** filled with oven dried quartz sand, grain size 0.1 - 0.3mm	0.6 – 1.5 kg/m²	notched squeegee / trowel	as scratch coat for unevenness ≥ 0,5 mm. Mixing ratio primer : quartz sand 1 : 0.5 - 1 in parts by weight depending on the thickness of the layer and on the temperature of the sub-base no broad cast
Grounding		**Copper Strips**		max. distance to the grounding point 10m	In combination with the following conductive primer
Conductive layer		**CONIFLOOR 150**	0.11 - 0.12 kg/m²	roll	Measurement of the complete earthing after min. 12 h at 20°C
Coating		**CONIFLOOR 420 AS**	2.3 – 2.5 kg/m²	notched squeegee / trowel	CONIFLOOR 420 AS Spike roll latest 5 - 10 min. after application
ESD sealing lacquer		**CONIFLOOR 535 esd**	0.12-0.15 kg kg/m²	roll	coloured, hard sealing lacquer for ESD-protection zone

Resistance to the ground:	10^5 bis 10^9 Ohm measured according to EN 1081
Bodyvoltage:	< 100 V measured according to DIN EN 61340-4-5
Resistance person-shoe-ground:	<3.5*10^7 Ohm measured according to DIN EN 61340-4-5
Total thickness of the system	approx. 1.5 mm

CE

CE-Label:
See Declaration of Performance

Preparation

Substrates to be coated must be firm, dry, load bearing and free of loose and brittle particles and substances, which impair adhesion such as oil, grease, rubber tyre marks, paint or other contaminants.

A pre-treatment of the substrate by grit or shot blasting, high pressure water jetting, grinding or scabbing including the necessary post-treatment is only necessary, when the layer is soiled or the re-coating intervals have been exceeded.

After the preparation the bond strength of the concrete must be at least 1.5 N/mm^2.

The sub base must contain a moisture barrier (damp proof membrane D.P.M.). The moisture level must not exceed 4 %.

The temperature of the substrate must be at least 3°C above the current dew point temperature.

As for the rest the sections of the requirements concerning substrates to be coated shown in the according guidelines apply.

Application method

Priming
CONIFLOOR 110 is rolled on the pre-treated substrate by a roller in a thin layer – puddles need to be avoided.

The consumption of CONIFLOOR 110 used as primer is approximately 0.3 - 0.5 kg/m^2, depending on the conditions on site and of the sub-base.

A 2nd application of CONIFLORR 110 with approximately 0.2 - 0.4 kg/m^2 may be necessary to ensure, that all pores and capillaries are completely sealed.

When there is unevenness of ≥0.5mm, a scratch coat has to be applied in order to equalize same.

Earthing
In order to assure conductivity, self-adhesive copper strips are fixed underneath the conductive layer at maximum intervals of 10 m. Generally the maximum distance of a measuring point to a grounding point is 10m.
The conductive copper strips are taken vertically up the wall panels to a height of at least 20 to 30 cm vertically and connected to on earth loop or directly to the earth connection points.

Apply CONIFLOOR 150 as a conductive primer with a paint-roller (consumption 0.11 – 0.12 kg/m^2).
Re-coating interval 12 up to 24 hours at 20°C.

The installation of the earth loop and the connection of the copper strips may only be carried out by a qualified electrician.

Before the application of the conductive bodycoat a measurement of the complete grounding have to be done.
The conductivity of the conductive layer CONIFLOOR 150 and the measured values depend on the distance to the earth point and should be in a range of approx. 10 kΩ to max. 80 kΩ.

Measurement:
It is recommended to measure the different layers to the installed earth-point during the application and to record the results.

Conductive Coating
The coating CONIFLOOR 420 AS is applied, either directly. After mixing the bodycoat CONIFLOOR 420 AS is applied to the substrate coated with CONIFLOOR 150, using a notched trowel or scraper. The teeth size should be selected according the thickness of layer required (take care not to exceed max. recommend coverage rate). To remove air bubbles, spike rolling 5 at 10 min. after application is necessary. This also helps to achieve a homogeneous surface of this conductive layer.

ESD-sealing lacquer

1-2 x CONIFLOOR 535 esd ca. 0.12-0.15 kg/m² each process on smooth surface With higher mechanical loads for example office chairs, it is necessary to apply a 2nd layer on top. Take care and follow recommended consumption rates. Less can cause striation or different degrees in gloss. Higher consumption can cause retention of water and pigment floatation.

Remarks

Please contact our Technical Department if there are questions.

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