CONIFLOOR 520 CW ESD

Two-part PUR ESD sealing lacquer, conductive, water based, low emission, pigmented with a silk-matt finish for EPA zones accord. EN 61340-5-1.

Product description

CONIFLOOR 520 CW ESD is a water based, solvent free, low emission and pigmented two-component silk-mat finished PUR sealing lacquer for ESD-protection zones (EPA).

Fields of application

CONIFLOOR 520 CW ESD is generally used to produce coloured, electrostatic dissipative sealing on dissipative AS and ESD coatings indoors. It is suitable for surfaces in ESD protection zones where a low electrostatic charge (charge to persons) and an electrostatic dissipative surface is required (EPA). Typical applications are in the semiconductor, electronics and automotive, microbiology and pharmaceutical industries, where the system must meet requirements of EN 61340-5-1, 4-1 and 4-5.
CONIFLOOR 520 CW ESD is also UV and colour stable and abrasion resistant.

Properties

CONIFLOOR 520 CW ESD has a good adhesion spectrum on hard top coats, is abrasion resistant and very resistant to scratches.

CONIFLOOR 520 CW ESD has good mechanical and chemical resistance after complete curing and is used as an ESD sealant in the systems:

- CONIFLOOR IES AS ESD
- CONIFLOOR IES ESD (N)
- CONIFLOOR IET ESD
- CONIFLOOR IPS AS ESD

and other systems.

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Technical Data

Mixing ratio	in parts by weight		8 : 1
Density	mix, at 23 °C	g/cm^3	1.13
Viscosity	mix, at 23°C	mPas	540-580
Pot life (9 kg mixture)	at 20 °C	Min	< 60
Re-coating interval	min., at 23 °C, 50 % rel. humidity max. at 23 °C, 50 % rel. humidity	h h	18 - 24 30
Ready for foot traffic	at 20 °C, 50 % relative humidity	h	18 - 24
Fully cured - ready for exposure to chemicals	at 23 °C, 50 % relative humidity	d	7
Substrate and application temperature	at least maximum	°C °C	5 20
Permissible relative humidity	maximum	%	75
Resistance to ground (EN 61340-4-1)*		Ohm	min. $R_g < 10^9$
Resistance system (EN 61340-4-5)*		Ohm	min. $R_s < 10^9$ and $R_s < 3.5 \times 10^7$
Body voltage / walking test (EN 61340-4-5)*		**V**	**< 50 V**

Above figures are guide values and should not be used as a base for specifications!

**** The named conductivity values are achieved in conjunction with the named CONICA systems!***

Application method

Please also note the information in our general processing guidelines.

The temperature of both components should be between +15 - +25°C.

CONIFLOOR 520 CW ESD is supplied in the correct proportions of component A (resin) and component B (hardener). Before mixing, the A component must be stirred up by machine, then the B component is poured into the container of the A component.

Care must be taken to ensure that the B component leaks completely, while carefully scraping out the container of spatulas. First, the B component is poured into the container of the A component. Care must be taken to ensure that the B component leaks completely, while carefully scraping out the container of spatulas.

To achieve a homogenous mix, thoroughly mix with a slow rotating mixing device at about 300 rev/min.

Ensure that the mixing device reaches the side and bottom areas of the mixing vessel.

The mixing process takes approximately 2-3 minutes and should be performed until the blend is homogenous and streak free.
After mixing, let stand for at least 10 minutes.

Do not use the product out of the mixing pail. Pour the mix into another clean pail and mix it again for 2 more minutes. We recommend using a sieve or lacquer sieve when repotting to remove fine impurities, e.g., from the mixing equipment.

CONIFLOOR 520 CW ESD is normally applied to the pre-treated substrate by rolling with a “Microtex” roller (Pile height: 10-12 mm). Roll out well, keep the overlap areas to a minimum, and keep wet edge always wet with fresh material.

It is necessary to re-roll freshly applied material with a second wet paint roller in one direction to obtain a uniform surface with a minimum of overlap marks.

The **connection line / overlapping times should not exceed 4-5 minutes** to avoid the risk of roller marks.

The areas of overlap with the previous line should be kept as small as possible, longer connection times and drafts should be avoided. Switch off underfloor heating or reduce it strongly before starting work.

Important: Make sure that doors and windows are closed, to avoid air circulation during the application and curing. Airflow can negatively influence the optical properties by creating roller marks.

The ambient, material, air circulations and substrate temperature influence the pot life and curing time of CONIFLOOR 520 CW ESD. At low temperatures, chemical reactions are generally slowed down; this lengthens the pot life, re-coating interval and open time.

At the same time, the viscosity increases which leads to a higher consumption. High temperature and humidity accelerate chemical reactions, so the contrary is true.

To fully cure the material, the substrate and working temperature must not fall below the minimum.

After application, the material must be protected from direct contact with water. Within this period, water could cause swelling of the sealing lacquer or stain.

CONIFLOOR 520 CW ESD top coat, make sure that no additional care products or cleaning agents are used that leave a film, as otherwise the specific conductive properties can be influenced.

Consumption
The consumption of CONIFLOOR 520 CW ESD is approximately between 0.14 – 0.18 kg/m^2.

Note for checking the conductivity:
To check the conductivity, the guideline values actual state of the art report "Conductive coatings for industrial floors" Deutsche Bauchemie e.V. recommended. Note: Before applying the conductive top coat, the CONIFLOOR EP 150 conductive layer and the following conductive coating must be measured.

Surface of coating system	Number of measurements
< 10 m²	1 measurement / m²
10 – 100 m²	10 – 20 measurements
> 100 m²	10 measurements / 100 m²

Distance of the measuring points at least 50 cm. Measured e.g., with a Metriso 2000 or 3000 measuring device. The measured value of the conductive layer should not exceed 10-15 kOhm. If the required measured value is not reached, further measurements must be done within 50 cm, which should then reach the measured value.

Cleaning agent
Re-usable tools should be cleaned carefully with water.

Substrate condition
CONIFLOOR 520 CW ESD is a hard top coat and is applied on our hard CONIFLOOR coatings CONIFLOOR 420 AS, CONIFLOOR 430 AS, CONIFLOOR 436 ESD or others as considering the expected mechanical stress to the system.

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 skid marks, paint, or other contaminants.

Sealing with CONIFLOOR 520 CW ESD needs to be done latest within 2 days (20°C) after latest application. Indicated re-coating intervals must be kept.

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

Pack size
CONIFLOOR 520 CW ESD is supplied in 9 kg working packs. A and B component are supplied separately in the correct proportions.

Colour
Standard colours RAL 7032 and RAL 7035 – further colours upon request

Please consider that due to the conductive surcharges there are colour differences to the standard product which are not a defect.

Care and Maintenance
To maintain the properties of synthetic resin floor coverings over the long term, we recommend regular cleaning and maintenance. Please ask for our general care instructions. Before using the coatings for the first time, we generally recommend that you carry out basic cleaning. Do not use film forming cleaning agents or polymeric waxes which are not conductive.

Storage
Store in original closed pails under dry conditions at a temperature range of 10 - 25 °C.

Important: Product is sensitive to frost!

Do not expose to direct sunlight.

Before use, please see "best before" date on the pail / drum.

Safety precautions
CONIFLOOR 520 CW ESD is non-hazardous in its cured condition.

For protective measures, transport regulations and waste management please refer to the Material Safety Data Sheet of the product.

VOC contents
CONIFLOOR 520 CW ESD meets the requirements of the EC directive 2004/42/EC.
The limit value for products ready for use (product type according to table IIA j Type wb) is:
Level II (from 2010) <140 g/l VOC.
When ready to use, this product contains less than 140 g/l VOC.

CE and UKCA marking:
See Declaration of Performance

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