

CONIFLOOR 420 AS

Two-part PUR self-levelling conductive coating, pigmented, low emission, total solid, tough hard, antistatic accord. to EN 1081 u. EN 61340-4-1

Product description

CONIFLOOR 420 AS is a two component, solvent free and low emission, self-levelling, pigmented, hard and tough, conductive PUR coating.

Fields of application

CONIFLOOR 420 AS is used as a coating on mineral, primed (with CONIFLOOR 110 or 116 LE) and with conductive primer CONIFLOOR 150 prepared substrates for indoor floorings with medium to heavy mechanical strain, where anti-static properties are required. CONIFLOOR 420 AS is used in our indoor antistatic flooring systems.

Properties

CONIFLOOR 420 AS exhibits high mechanical properties and is easy to apply. Due to its tough hard properties the coating CONIFLOOR 420 AS is still slightly elastic and therefore is able to bridge deformations (e.g., occurring static cracks) in the sub-base.

CONIFLOOR 420 AS fulfils the requirements for explosion protection in the AS system build-up. The resistance to earth measured according to DIN EN 1081 is in the range of 10^4 to 10^6 ohms or in the AS-ESD system according to EN 61340-4-1 and $4-5 \leq 10^9$ ohms.

CONIFLOOR 420 AS is easy to clean and resistant to water, sea and wastewater, a variety of alkaline substances, diluted acids, brine, mineral oils, lubricants and fuels.

The yellowing, which occurs when CONIFLOOR 420 AS is exposed to UV light, does not affect its mechanical properties.

CONIFLOOR 420 AS is used in the systems

- CONIFLOOR IPS AS
- CONIFLOOR IPS AS-ESD

and others.

Technical Data

Mixing ratio	in parts by weight			100:20
Density	mix,	at 23 °C	g/cm ³	1.47
Viscosity	mix,	at 23 °C	mPas	3600
Processing time		at 12 °C	min. approx.	25
Re-coating interval / ready for foot traffic		at 20 °C	minimum h maximum h	18 – 24 48
Substrate and application temperature	minimum maximum		°C °C	15 30
Permissible relative humidity	maximum		%	70
Ready for	mech. strain	at 20 °C	d	5
	Light mech. strain	at 20 °C	d	1
	chem. strain	at 20 °C	d	7
Shore D hardness	after 28 d			67
Resistance to ground (EN 1081)			Ohm	R _g 10 ⁴ - 10 ⁶
Resistance to ground (EN 61340-4-1)			Ohm	R _g < 10 ⁹
<i>Above figures are guide values and should not be used as a base for specifications!</i>				

Application method

Please also [note the information in our general processing guidelines](#).

CONIFLOOR 420 AS 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 and ensure that the pail containing component B is [emptied](#) completely.

NOTE:

The CONIFLOOR 420 AS uses the A component of the CONIFLOOR 420 standard coating, only the B component is equipped with the conductive additive.

The set consists of

CONIFLOOR 420	component A
CONIFLOOR 420 AS	component B.

To achieve a homogenous mix, thoroughly mix with a slowly rotating mixing device at about 300 rev/min. Ensure that the mixing device reaches side and bottom areas of the mixing vessel. The [mixing process](#) takes [at least 3 minutes](#) and should be performed until the blend is [homogenous](#) and streak free. [Pour](#) the mix into another [clean](#) pail and mix it again for 1 additional minute.

The [temperature](#) of the components should be between 15-25 °C.

CONIFLOOR 420 AS can then be applied directly to the pre-treated substrate of at least approx. 1.5 mm thickness. CONIFLOOR 420 AS is applied using a **rubber tooth squeegee**. The teeth size of the tool needs to be adjusted to the calculated consumption per 1m²

Cross-wise [spike rolling](#) after application is necessary to [de-aerate](#) the coating and to get a homogenous spreading of the carbon fibres in the surface. We recommend starting [with spike rolling only about 5 - 10 minutes after applying the coating](#).

The ambient and substrate temperature influences working life and curing time of CONIFLOOR 420 AS. At low temperatures, the chemical reactions are slowed down; this lengthens the pot life, re-coating interval and open time. 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 should be protected from direct contact with water for approx. 12 hours (at 20 °C). Within this period, contact with water can cause foaming on the surface of the coating.

Consumption

The consumption rate of CONIFLOOR 420 AS for a layer of at least approx. 1.5 mm is 2.2 up to max. 2.5 kg/m².

The [maximum](#) thickness of this coating layer should not exceed 1.5 mm.

Depending on the on the surface roughness of the cast asphalt the consumption of CONIFLOOR 420 used as base scratch coat is approximately 0.8-1.2 kg/m².

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 coating, the CONIFLOOR 150 conductive layer must be measured.

Surface of coating system	Number of measurements
< 10 m ²	1 measurement / m ²
10 – 100 m ²	10 – 20 measurements
> 100 m ²	10 measurements / 100 m ²

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 CLEANER 40 or other suitable solvents (e.g. butyl acetate).

Never use water or alcoholic solvents as cleaners!

Substrate condition

Cement bound 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.

A pre-treatment of the substrate by grit or shot blasting, high-pressure water jetting, grinding or scabbing including the necessary post-treatment is mandatory.

After the pre-treatment, the bond strength of the concrete must be at least 1.5N/mm².

The [moisture level](#) must not exceed [4 %](#).

The [temperature](#) of the substrate must be at least [3°C](#) above the current dew point temperature.

The sub base must contain a moisture barrier (damp proof membrane D.P.M.).

CONIFLOOR 420AS is applied on the pre-treated and with CONIFLOOR 110, 112 or 116 LE primed sub-base.

The relative [humidity](#) level may not exceed [70%](#).

Notice for bituminous sub-bases:

CONIFLOOR 420 is used as a primer and applied as a thin layer directly on bituminous sub-bases (cast asphalt used indoors with sufficient hardness).

Then apply the conductive primer CONIFLOOR 150 and at least conductive the self-levelling coating CONIFLOOR 420 AS.

When preparing the sub-base by grit blasting with the necessary post-treatment (dust free!) special attention needs to be paid to the grains in the cast asphalt. At least 70 % of the grains need to be open and free of asphalt to allow sufficient adhesion.

If needed the quality of the sub-base needs to be tested carefully – contaminations in the cast asphalt have to be avoided.

After the pre-treatment, the bond strength of the concrete must be at least 1.5N/mm².

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

Pack size

CONIFLOOR 420 AS is supplied in 25 kg (metal) working packs. Components A and B are supplied in the correct proportions and delivered separately.

The set consists of
CONIFLOOR 420 component A
CONIFLOOR 420 AS component B.

Colours

Standard colours after approx. RAL or on request

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

Note: Please note that aromatic polyurethane resins turn yellow due to UV light. This also applies to indoor applications. As we generally recommend an additional UV and colour-stable, pigmented aliphatic polyurethane resin sealing lacquer on these products, **no colour matching is performed**. The colour meets colour standards such as RAL or NCS and others with a colour deviation of $\Delta E \leq 2$ (otherwise $\Delta E \leq 1$).

Please also note our supplementary information on colours and surfaces.

If necessary, and especially with very light shades, it may be necessary to seal twice in white shades up to three times.

If you have any questions, please contact the technical service of CONICA AG.

Storage

Store in unopened pails under dry conditions at a temperature range of 5-25 °C.

Do not expose to direct sunlight.

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

Safety precautions

CONIFLOOR 420 AS 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 420 AS 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 sb) is:

Level II (from 2010) <500 g/l VOC.

When ready to use, this product contains less than 500 g/l VOC.



CE and UKCA marking:

See Declaration of Performance

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