

CONIFLOOR PU 470

Two-part PUR coating, pigmented, low emission, for roller coatings, thin layer and <u>fillable</u> self-levelling coatings and wear coats, tough hard

Product description

CONIFLOOR PU 470 is a two component, solvent free and low emission, self-levelling, and pigmented, tough hard PUR coating.

Fields of application

CONIFLOOR PU 470 is used as a statically crack bridging roller coating and thin layer self-levelling coating, as additional fillable self-levelling coating or as broadcasted wear coat on primed (e.g., with CONIFLOOR EP 110, EP 712 or EP 116 LE) substrates for indoor floorings with light to medium heavy mechanical stress.

On bituminous substrates (cast asphalt with sufficient rigidity and hardness), CONIFLOOR PU 470 can be used as scratch primer in this case.

Properties

CONIFLOOR PU 470 exhibits high mechanical properties and is easy to apply. Due to its hard and tough properties the coating CONIFLOOR PU 470 is still slightly elastic and therefore is able to bridge deformations (e.g., occurring static cracks) in the sub-base.

CONIFLOOR PU 470 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 PU 470 is exposed to UV light, does not affect its mechanical properties. To avoid the yellowing, it is recommended to use sealing lacquer CONIFLOOR 520 CW which at the same time increases the resistance against scratches.

CONIFLOOR PU 470 is used in our indoor flooring systems

- CONIFLOOR IPL
- CONIFLOOR IPL SL
- CONIFLOOR IPL SR.

and others.

Technical Data

Mixing ratio	in parts by w	reight	100 : 48		
Density	mix,	at 23 °C	g/cm³	1.10 (unfilled) 1.27 (1:0.3 filled) 1.49 (1:0.8 filled)	
Viscosity	mix,	at 23 °C	mPas	920 – 1'050	
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	10 30	
Permissible relative humidity depending on dew point	maximum		%	70 !	
Ready for mech. strain light mech. strain chemical strain	at 20 °C at 20 °C at 20 °C		d d d	5 1 7	
Shore D hardness	after 28 d			59 (unfilled)	
				67 (filled)	
Above figures are guide values and should not be used as a base for specifications!					



Application method

Please also note the information in our general processing guidelines.

CONIFLOOR PU 470 is supplied in the correct proportions of component A (resin) and component B (hardener). Before mixing, the A-component must be stirred up mechanically, then the B-component is poured into the container of the Acomponent. Ensure that the pail containing component B is emptied completely.

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 2-3 minutes and should be performed until the blend is homogenous and streak free.

If additional filling is required, the filler (e.g., dried quartz sand with a grain size of 0.1 - 0.3 mm) is added to the current mixture. For additional filling, it is necessary to fill into another mixing vessel in which the filling quantity of the filler also fits.

Pour the mix into another clean pail and mix it again for one additional minute.

The temperature of the components should be between 15-25 $^{\circ}$ C.

After mixing, the material must be quickly emptied from the container and distributed immediately.

The relative humidity must not be greater than 70%.

The material is then processed directly unfilled or, with at least 1.5 mm layer thickness as a thick self-levelling coating which should be filled with fire-dried quartz sand with a grain size of 0.1-0.3 mm from 30 to 80 % (depending on temperature and layer thickness) adding under constant stirring.

CONIFLOOR PU 470 is applied to the prepared substrate using a toothed trowel or toothed squeegee (metal or rubber toothing). The toothing must be adapted to the calculated consumption per 1 m^2 . Information on the individual layer thicknesses and consumption can be found in the system data sheets.

At high filler levels or at low temperatures, it is recommended, if necessary, to thoroughly de-aerate the coating using a spike roller.

Both the processing time of CONIFLOOR PU 470 and the hardening of the covering are determined by the temperature of the material, the substrate, and the environment. At low temperatures, the chemical reactions are delayed; This also extends the pot and recoating times. Conversely, chemical reactions are accelerated at high temperatures, so that the above times are correspondingly shortened.

For CONIFLOOR PU 470 to cure completely, the mean temperature of the substrate must not fall below the lowest processing or object temperature.

After application, the material must be protected from direct contact with water for at least 12 hours (min. 20 $^{\circ}$ C). During this time, the action of water on the surface can cause foaming or blistering of the covering.

Consumption

For <u>thin roller coatings</u>, you can start with a <u>consumption</u> of $300 - 400 \text{ g/m}^2$ (unfilled), here the surface is rolled over again with a short-pile paint roller when it is fresh. Depending on the substrate, however, structures cannot be ruled out in this application.

For <u>thin-layer self-levelling coatings</u>, we recommend a consumption of at least 600 g/m² to a maximum of 1,100 g/m². The application is carried out with a suitable metal rake or spatula, or rubber toothed squeegee.

If thicker layers are used <u>for self-levelling coatings</u>, we recommend an additional filling with fire-dried quartz sand with a grain size of 0.1-0.3 mm in a mixing ratio of up to 1: 0.3 parts by weight (30%) (depending on temperature) from a consumption of 1,200 g / m^2 .

The degree of filling can be increased to 1: 0.8 (80 %), also depending on the temperature and layer thickness.

Recommended consumption per mm of layer thickness:

1.10 kg/m² per mm	unfilled
approx. 1.27 kg/m² per mm	1: 0.3 filled
approx. 1.37 kg / m² per mm	1: 0.5 filled
approx. 1.49 kg / m² per mm	1: 0.8 filled

The exact mixing densities can vary slightly depending on the grading curve of the quartz sand used.

The maximum layer thickness should not exceed 3.0 mm in one layer, as there is a risk of being pushed off, especially on slightly or steeply sloping surfaces. Alternatively, the layer thickness can be increased with a multi-layer design.

CONIFLOOR PU 470 can be used as a <u>wear coat</u> for scattering with fire-dried quartz sand from a consumption of approx. $500 - 600 \text{ g/m}^2$. More than 1,200 g/m² should not be used in one layer for wear coats.

In the case of mastic asphalt, the consumption as a primer coat is approx. 400 - 800 g/m2, depending on the roughness depth.

Due to the yellowing of CONIFLOOR PU 470 under the influence of UV light, CONIFLOOR 520 CW is recommended as a top sealer for smooth surfaces. For the use on with quartz sand broadcasted surfaces the use of epoxy resin, polyurethane or polyaspartic resins as a top coat is recommend. You can find detailed information on this in our system data sheets for the CONIFLOOR IPL series.



Cleaning agent

Re-usable tools should be cleaned carefully with CLEANER 40, CLEANER 45 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, diamond grinding or scabbing including the necessary posttreatment is mandatory.

After the pre-treatment, the bond strength of the concrete must be at least $1.5N/mm^2$.

The moisture level must not exceed 4 %.

The temperature of the substrate must be at least $3^{\circ}C$ above the current dew point temperature.

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

CONIFLOOR PU 470 is applied on the pre-treated and with CONIFLOOR 110, 112 or 116 LE primed sub-base.

Notice for bituminous sub-bases:

CONIFLOOR PU 470 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 CONIFLOOR PU 470 as self-levelling coating. 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 subbase 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 $1.5N/mm^2$.

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

Pack size

CONIFLOOR PU 470 is supplied in 12.95 kg or 24.7 kg (metal) working packs. Components A and B are supplied in the correct proportions and delivered separately.

Colours

Standard colours after approx. RAL or on request

Note: Please note that aromatic polyurethane resins turn yellow due to UV light. This also applies to indoor applications. As we 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 $\Delta E \le 2$ (otherwise $\Delta E \le 1$).

Depending on the quartz sand used and the amount of filler, a change in the original colour of CONIFLOOR PU 470 cannot be ruled out. This usually has no effect as the coating has to be reworked with a pigmented sealer.

Please also note our supplementary information on colours and surfaces.

If necessary, and especially with noticeably 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 $^\circ\text{C}.$

Do not expose to direct sunlight.

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

Safety precautions

CONIFLOOR PU 470 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 PU 470 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-Label / UKCA-Label: See Declaration of Performance.

CONICA AG Tel.: + 41 52 644 3600 Whilst any information contained herein is true, accurate and represents our best knowledge and experience, no warranty is given or implied with any recommendations made by us, our representatives, or distributors, as the conditions of use and the professional info@conica.com www.conica.com www.conica.com

As all CONICA data sheets are updated on a regular basis, it is user's responsibility to obtain the most recent issue. Registered users can obtain the actual data sheets from our webpage. Hard copies are available upon request.