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NANTEN PU FLEX BIO



Product description

2-component, M1-classified, self-smoothing, elastic polyurethane coating. The certified Nanten PU Flex Bio waterproofing system is suitable for waterproofing floors in technical rooms. It can also be used on wooden substrates. Compatible products include: Fescon Flow CS or FlowPlan, Nanten HM Bio or Nanten HM Bio Low VOC, Nanten PU Flex Bio, Nanten M Primer, Nanten F Primer, and Nanten Epoxy Barrier.

- Elastic and highly resistant to wear and impact
- Resistant to continuous exposure to oils, fats, fuels, commonly used cleaning agents, and salts, and to temporary exposure to mild acids and alkalis
- Suitable for concrete, asphalt, and plywood surfaces
- Low-emission
- Product certificate No. EUFI29-23003817-C by Eurofins Expert Services Oy

Applications

- Areas subject to medium and light-duty stress
- Technical rooms, ventilation machine rooms
- Schools, daycare centers
- Healthcare facilities
- Offices
- Shops
- Balconies (UV protection according to Fescon design and installation guidelines for concrete balconies)

Instructions

Base requirements and coating conditions

The concrete must have a minimum strength class of C25/30 and wear resistance class 3. The relative humidity of the concrete must be below 90% when priming is done with a polyurethane coating. For epoxy-based primers, see section “Priming Treatment.” The surface temperature must be at least +3°C above the dew point. During application and curing, the temperature of the air, surface, and coating must be above +15°C, and the relative humidity must be below 70%. Ensure the suitability of the coating for the substrate to be treated.

New concrete floor

Cement laitance and any uncured cement must be removed by surface grinding or shot blasting. All loose and adhesion-reducing material must be removed, and the surface must be thoroughly vacuumed to remove all cement dust.

Old concrete floor

Cement laitance and deteriorated concrete must be removed by grinding or shot blasting. All loose and adhesion-reducing material must be removed, and the surface must be thoroughly vacuumed.

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Dirty floors should be washed and rinsed with a synthetic detergent before any further surface preparation. Any existing old paint film must be completely removed from the substrate.

Priming

Priming is done with Nanten HM Bio Epoxy (for concrete with RH < 95%) or with Nanten M Primer for damp concrete (RH < 98%). Dilution may be used on concrete substrates if necessary. Adequate ventilation must be provided in the work area. On asphalt and plywood substrates, thinner must not be used; the Nanten PU Flex polyurethane coating is applied as primer without dilution. The primer must seal all pores in the concrete to form a dense and continuous film on the surface. Apply a second coat if necessary.

Patching

Small holes and cracks are cleaned and filled with a putty made of, for example, PU Flex Bio Coating and fine filler sand. Larger leveling work can be done using a levelling mortar made of Nanten PU Flex Bio Coating and filler sand (0.1–0.6 mm).

Mixing

Pre-mix Part A and Part B in their own containers. Combine the components in the correct ratio and mix with a low-speed mixer for two minutes, avoiding air entrapment in the mixture. Pour the mixture into a second container and continue mixing for approximately one more minute, again avoiding air entrapment.

Mixing ratio

Part A: 3 parts by volume
Part B: 1 part by volume

Coverage

At 1 mm film thickness: 1 l/m^2

Application instructions

If the priming is older than two days, the surface must be roughened by sanding and all sanding dust must be removed. The mixed material is poured onto the floor in a puddle or continuous bead and spread with a notched trowel to the desired thickness. As the work progresses, the surface should be rolled with a spike roller to remove air bubbles. Do not scrape or pour the remaining material from the mixing container onto the substrate. Do not apply in direct sunlight or under damp conditions. Inadequate mixing may result in uneven curing or color variation.
The color of the coating will change under UV exposure; a separate UV protection improves light resistance. If needed, UV protection can be applied afterwards, for example, with a PU W2 topcoat. If the product is used outdoors, such as for coating balcony slabs, detailed application and UV protection instructions can be found in the Fescon design and installation guidelines for concrete balconies. Do not apply in direct sunlight or under damp conditions. Inadequate mixing may result in uneven curing or color variation.

Waste handling

Storage and handling of waste
See the separate storage and disposal instructions https://www.fescon.fi/en/material-bank

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Technical information

Colour	Standard shades: Nanten 257 and 241. Tintable according to the Nanten and RAL colour charts.
Painting supplies group (paintingRYL2012)	665, 666, RL 04, RL 06
Gloss group	Full gloss
Package size	Part A in a 15 l metal container and Part B in a 5 l plastic container. Part B is also available in 184 l drums.
Storage	+5°C to +25°C, shelf life up to 6 months. Must be stored in a warm location in tightly sealed original containers.
Mixing time	Approx. two minutes
Density	1.24–1.26 kg/l, depending on the amount of color paste used
Usage temperature	+15°C…+25°C
Usage time	In the container: approx. 15 minutes Once poured onto the floor: approx. 20–30 minutes Working time shortens as temperature increases.
Drying time	Touch-dry in 5 h (+25°C) and 9 h (+15°C). Resists light traffic after approx. 12 h (+25°C) and approx. 24 h (+15°C). Fully cured in 7 days.
Relative air humidity	Below 80% during application and curing of the coating
Solids content	Approx. 100 vol-%
Thinner	Do not dilute
Method of application	Applied with a notched trowel or a straight-edge trowel
VOC content	< 5 g/l (ready-to-use mixture)EU VOC 2004/42/EC (Cat A/j) max. 500 g/l (2010)
Washing tools	Nanten PU Thinner
GWP A1 raw material	2.54
GWP A2 transport	0.198
GWP A3 manufacturing	0.554
GWP A1-A3	3.29
GWP A4 transport	0.0239
GWP A5 assembly	0.954
GWP unit	kg CO2e/kg

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Remember to consult the Maintenance Instructions for Coated Floors and the product Safety Data Sheet on our website at www.fescon.fi, or request a copy by calling +358 9 274 7970. Although the technical details provided in this product description are based on our best knowledge and experience, the information above should always be regarded as indicative. The user is responsible for verifying the suitability of the product for the intended application. If the instructions are not followed, the user assumes full responsibility for any resulting damage or consequences. Limitation of liability, product use notes and restrictions: Please familiarize yourself with Fescon Oy's general terms of delivery and the design and work instructions related to the product.