Nanten SL BIO Epoxy Coating

Ecological wear-resistant self-smoothing floor covering made of natural renewable materials

PRODUCT TYPE

Nanten SL BIO Epoxy Coating is an ecological 2-component wear-resistant self-smoothing epoxy coating for old and new concrete floors. The coating contains very low levels of volatile organic compounds (VOC), while the content of fast renewing raw materials is 37%.. SL BIO Epoxy Coating is suitable for LEED construction projects. The surface is hygienic, easy to clean and contains no components promoting the growth or bacteria, and no biocides. The product has good UV resistance. Painting supplies group 52.2 (RT-classification).

APPLICATION

Public premises, hospitals, laboratories, schools, day-care centres, offices, supermarkets, warehouses, logistics centres and other sites exposed to heavy and medium-duty use and liable to environmental certificate. LEED and BREEAM projects aiming to follow sustainable development principles, use products that impose less load to the environment and reduce the carbon footprint during the whole life span of the building. According to LEED 2012, the certificate can be acquired also for renovation sites.

PROPERTIES (LEED)

With the use of Nanten BIO Epoxy products, the LEED classification of the building can be improved in the following areas:

Indoor Environmental Quality: IEQ Credit 4.2
Low-Emitting Materials-Paints & Coatings

Materials and Resources: MR Credit 6
Rapidly Renewable Materials

Nanten SL BIO Epoxy has good mechanical and chemical resistance. Resilience class based on film thickness (0.5 – 3.0 mm) BC2-BC4 (by 54/BLY 12).

71 % 37 %	60 g/l < 100 g/l
Natural Renevable	VOC LEED

TECHNICAL DATA

Green Value: Natural materials account for 71%, fast renewing biological raw materials account for 37%. Volatile organic compounds, VOC 60 g /l, LEED < 100 g /l (SCAQMD) Rule 1113.

Colours

Standard colours of Nanten colour chart, colours in stock Nanten 257, 241 and 265, staining with RAL colours also possible.

Gloss group Full gloss.

Material consumption

Consumption with filler sand and 2 mm coating thickness approx. 1.3 l /m^2.

Mixing ratio

(Part A) resin 3 parts by volume and (Part B) hardener 1 part by volume.

Package

Part A in 15 l tin containers and part B in 5 l plastic containers.

Application time (+ 20°C)

Approx. 20 -30 minutes when poured on the floor. With higher temperatures the time is shorter.

Drying time

Dry to touch only in 4 h (+ 25°C) and 8 h (+ 15°C). Dry, durable to light traffic in approx. 12 h (+ 25°C) and > 24 h (+ 15°C). Fully cured in approx. 7 days.

Application method

Spread with a toothed steel trowel or variable trowel.

Dilution Do not dilute the product.

Cleaning of tools

Tools can be cleaned with e.g. ethyl acetate.

Storage

+ 5°C …+ 25°C, max. storage time 6 months. Store in a warm room, in tightly sealed original containers.

TECHNICAL PROPERTIES

Membrane thickness

Can be selected according to the use intensity of the premise, usually 0.5 – 3.0 mm (DFT).

Density (+ 25°C)

1,37… 1,40 kg/ l, depending on the quantity of colour paste.

Solid matter content About 100% by volume.

Final hardness Shore D 83.

Fire class B_{FL} -s1, SFS-EN 13501-1.

VOC (calculated)

VOC in application mixture 60 g /l.
LEED IEQ 4.2 IM Coatings < 100 g /l, 2011
EU VOC 2004/42/EC (cat A/j) max. 500 g /l (2010).

DIRECTIONS FOR USE

Surface requirements and application conditions Concrete strength class should be at least C25/C30 and wear resistance class 3. Concrete relative humidity should be below 95% and surface temperature at least 3°C above dew point. Air, surface and coating temperature should be over + 15°C and relative humidity below 80% during the coating application and drying.

Surface preparation

New concrete floor

Remove laitance and any non-cured cement by surface grinding, shot-blasting or milling. All loose material which lowers adhesion should be cleared away and cement dust carefully removed with a vacuum cleaner.

Old concrete floor

Remove laitance and deteriorated concrete by surface grinding, shot-blasting or milling. All loose material which lowers adhesion should be cleared away and the substrate carefully cleaned with a vacuum cleaner. Soiled floors should be washed and rinsed with synthetic detergent before any works on the substrate. Remove completely any old films of paint in the substrate.

Priming

Prime with Nanten HM BIO Epoxy. The primer should seal all the pores in the concrete and form a uniform tight and intact film on the surface.

Filling

Small hollows and cracks should be cleaned and filled with epoxy filler, such as a filler prepared with HM BIO Epoxy and fine filler sand. Larger and more extensive filling/levelling can be performed with a filling/levelling mixture made of Nanten SL BIO Epoxy Coating and filler sand (0.1 - 0.6 mm).

Mixing of components

First stir part A and part B of SL BIO Epoxy Coating in their own containers, calculate the required amount of prepared mixture, considering the surface area to be coated and the mixture application time. Blend the components into one another in the correct ratio and continue with a mixer at low speed for about two minutes, trying to avoid mixing any air into the mixture. Add the required quantity of filler sand while mixing at the same time. Continue mixing for about a minute, reaching into the corners of the container.

Coating

If the primer was applied more than two days ago, the surface should be roughened by sanding and sanding residues should be removed. Pour the mixed compound to the floor in a pool or in a uniform strip and spread with a variable trowel until achieving the required layer thickness. After spreading, roll the surface in the course of the work with a spike roller to remove air pockets. Consumption with film thickness 2 mm approx. 1.3 l SL BIO epoxy and approx. 1.5 kg filler sand /m^2.

Care of the coated floor: See www.nanten.fi / products / cleaning and care instructions.

APPLICATION SAFETY:

See www.nanten.fi / products / material safety data sheets.

CE

Nanten Oy
Teollisuustie 6, FI-04300 Tuusula

13

0809 -CPR- 1037

EN 1504-2:2004

Protection and repair agent for concrete structures – Coating

		SL BIO Measured values
Wear resistance	Weight loss < 3000 mg	120 mg
Capillary absorption and water permeability	w < 0,1 kg/m^2 x $h^{0.5}$	0.01 kg
Impact resistance	Class III: ≥ 20 Nm	20 Nm
Adhesion strength in tensile test	≥ 2.0 N/mm2	3.8 N/mm^2
Fire behaviour	B_{fl}-s1	B_{fl}-s1
Anti-slip	Class II > 40	107

Nanten Oy
Teollisuustie 6 • FI-04300
Tuusula Tel. 09-274 7870
www.nanten.fi