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NANTEN HM BIO LOW VOC

Product description

Solvent-free, trowel-applied epoxy coating. Very low VOC emissions into indoor air.
- Good mechanical resistance and light stability (non-yellowing)
- Emission class for building materials: M1
- Also used for priming concrete substrates

Applications

- Heavily loaded industrial and storage facilities
- Production areas
- Commercial kitchens
- Process industry premises

Instructions

Base requirements and coating conditions

The concrete strength class must be at least C25/30 with a wear resistance class of 3. The relative humidity of the concrete must be below 95%, and 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 remain above +15°C, and the relative humidity of the air must be below 80%.

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. 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 undiluted Nanten HM Bio Low VOC. The primer must seal all pores in the concrete so that a dense and continuous film is formed on the surface. Adhesion sand is broadcast onto the primer as work progresses.

Patching

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Small holes and cracks are cleaned and filled with an epoxy putty made of, for example, Nanten HM Bio Low VOC and fine filler sand. Larger or more extensive overfills, leveling, and slope formation can be done using a filling/levelling mortar made of HM Bio Low VOC and filler sand (0.7–1.2 mm).

Mixing

Pre-mix Part A and Part B of HM Bio Low VOC in their own containers. Estimate the required amount of mixture based on the size of the area to be treated and the working time of the product. Combine the components in the correct ratio and mix with a low-speed mixer for approximately two minutes, avoiding air entrapment in the mixture. Add the required amount of selected Nanten color sand or color sand blend while mixing, and continue mixing for about one minute. Ensure that material on the sides and bottom of the container is thoroughly mixed.

Mixing ratio

Part A: 2 parts by volume
Part B: 1 part by volume
Filler sand 0.7–1.2 mm: approx. 65–70 kg per 15 l

Coverage

At 4 mm coating thickness
Binder (Part A + Part B) approx. 1.4 l/m^2 (1.5 kg/m^2), filler sand approx. 7 kg/m^2
For priming approx. 0.2-0.3 l/m^2
For top coating approx. 0.25-0.4 l/m^2

Coating

The mixed material is poured onto the floor in a continuous bead and spread with a notched trowel to the desired thickness. Application is carried out in strips, allowing finishing from untreated areas of the floor. After spreading, the material is compacted manually with a steel trowel or mechanically to achieve a smooth surface.

Top coating

Once cured, the compacted trowel coating must be sealed with undiluted Nanten HM Bio Low VOC. We recommend applying two coats to achieve a hygienic and easy-to-maintain surface.

Coved skirtings

Coved skirtings are formed using the epoxy trowel mortar, stiffened with thickening fiber (Sylothix) to facilitate application.

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	The color of the coating is determined by the selected Nanten color sand or color sand blend
Package size	Part A in a 10 l metal container, Part B in a 5 l plastic container
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	Approximately two minutes
Usage temperature	+15°C...+25°C
Usage time	Poured onto the floor: approx. 20–30 minutes. Working time decreases as temperature rises.
Drying time	Touch-dry in 11 h (+25°C) and 20 h (+15°C). Resists light traffic after approx. 24 h (+25°C) and approx. 40 h (+15°C). Fully cured in 7 days.
Adhesion strength	1.5 N/mm^2
Reaction to fire	Bfl-S1
Relative air humidity	Below 80% during application and curing of the coating
Chemical resistance	Class II
Thinner	Do not dilute (solvent-free M1-classified product)
Method of application	Applied with a notched trowel and finished with a steel trowel or mechanically with a power trowel. For priming and top coating, use a suitable roller.
VOC content	< 20 g/l (ready-to-use mixture)EU VOC 2004/42/EC (Cat A/j) max. 500 g/l (2010)

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.