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NANTEN EPOXY BARRIER



Product description

2-component encapsulation agent for harmful compounds and residues in structures (VOC, PAH, PCB), as well as asbestos, casein, microbes, radon and other gases.

- Safe to use, low-emission, and solvent-free. Being completely waterproof, it also prevents moisture from penetrating into the underlying structures through, for example, tile joints, thereby helping to prevent potential damage.
- Designed for encapsulating harmful substances and problematic compounds in concrete substrates that may cause indoor air quality issues in renovation projects. Used as a sealing layer beneath coatings and coverings, and is compatible with several types of leveling compounds.

Applications

- Encapsulation of harmful substances in concrete substrates
- Renovation projects
- Used as a sealing layer beneath coatings

Instructions

Base requirements and coating conditions

The tensile strength of the concrete must be at least 1.5 MPa, and the substrate's relative humidity must be below 95% or 4.5% by weight. The surface temperature must be at least +3°C above the dew point. During the curing of the encapsulation treatment, the ambient and substrate temperature must be above +10°C, and the relative humidity 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 cement dust must be carefully vacuumed off.

Old concretec 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

Epoxy Barrier can be used as a primer in Nanten coating systems. The mixed Epoxy Barrier is poured onto the floor in a continuous ribbon and spread using a roller or rubber trowel. Consumption approx. 0.2–0.3 kg/m^2.

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Patching

Small holes and cracks must be cleaned and filled with an epoxy filler prepared from Nanten HM Bio Epoxy and fine filler sand.

Mixing

Pre-mix Part A and Part B of the Epoxy Barrier sealing epoxy thoroughly in their respective containers. Combine the components and mix with a slow-speed mechanical mixer for approximately three minutes, avoiding air entrapment in the mixture. Do not divide the components into partial batches.

Mixing ratio

Mixing ratio by weight: 2:1
Part A: 1.7 parts by volume
Part B: 1 part by volume

Coverage

For encapsulation, the consumption is approximately 0.75 kg/m^2, depending on the porosity of the substrate.

Encapsulation treatment 1 / Coating

For encapsulation, apply Epoxy Barrier as a priming layer at approximately 0.35 kg/m^2. After the primer has dried, apply a second, generous cross-coat of Epoxy Barrier sealing epoxy at approximately 0.4 kg/m^2. The selected Nanten coating product must be applied within 48 hours of the encapsulation treatment. When using Nanten HM BIO troweled epoxy coating systems, a new primer coat with broadcast sand must be applied over the encapsulation layer to ensure adhesion and facilitate the spreading of the trowel coating. All Nanten floor coatings are compatible with the encapsulated surface.

Encapsulation treatment 2 / Flooring Installation

Epoxy Barrier + various floor coverings

When encapsulating under floor coverings (vinyl, laminate, ceramic tiles, parquet, composite tiles, etc.), apply Epoxy Barrier as a priming layer on concrete or screed surfaces at approximately 0.35 kg/m^2. After the primer has dried, apply a second cross-coat of Epoxy Barrier at approximately 0.4 kg/m^2.

Mechanical bonding

To ensure adhesion for screeds or tile adhesives used in flooring installations, the wet Epoxy Barrier layer must be fully broadcast with 0.3–0.8 mm quartz sand.

Chemical bonding

To ensure adhesion of the chosen screed, apply a compatible bonding primer (e.g., from Fescon Oy) over the cured Epoxy Barrier. The suitability of the screed for the intended use and installation conditions must be confirmed with the screed manufacturer.

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Encapsulation breatments / wall-Floor junctions and penetrations

To ensure tightness in junctions and around penetrations, use compatible sealing/reinforcement tapes (e.g., from Fescon Oy).

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	Light-coloured liquid
Package size	Part A 6 kg and Part B 3 kg in a container. Total set 9 kg.
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. three minutes
Density	Mixture 1.11 kg/l
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 21 h (+15°C). Resists light traffic after approx. 24 h (+25°C) and > 24 h (+15°C).
Relative air humidity	Below 80% during application and curing of the coating
Thinner	Do not dilute
Method of application	Application with roller, notched trowel or rubber trowel
VOC content	1 g/l (ready-to-use mixture)EU VOC 2004/42/EC (Cat A/j) max. 500 g/l (2010)
GWP A1 raw material	5,04
GWP A2 transport	0,251
GWP A3 manufacturing	0,959
GWP A1-A3	6,25
GWP A4 transport	0,0341
GWP A5 assembly	0,133
GWP unit	kg CO2e/kg
Method for calculating the GWP value	EPD

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.