

Nanten HM AR Epoxy

Chemical and high abrasion-resistant epoxy resin for float-coating applications in aggressive industrial environments

PRODUCT TYPE

Nanten HM AR Epoxy is colourless two-component, epoxy resin compound with very good chemical and abrasion resistance for float-coating applications on old and new concrete floors. Also suitable as primer for epoxy coatings and finishing varnish of epoxy float-coatings. The compound's content of volatile organic compounds (VOC) is very low. The coated surface is hygienic, easy to clean and does not contain biocides or ingredients contributing antimicrobial growth. It has good UV-resistance and it's hardening is faster than normal even at low temperatures.

APPLICATION

Industry and warehouse floors subjected to heavy stress, food production facilities, kitchens, process industry facilities, and in particular the floors which are subject to several stress caused by chemicals, water or temperature changes.

CHARACTERISTICS

Very good mechanical and chemical resistance. Resistant to constant contact with oils, grease, fuel, weak acids, salts and to temporary contact with most strong industrial acids and alkalis. At thermal shock/steam cleaning areas, the minimum thickness of float-coating must be 6 mm. Exposure class BC5-Mec and BC5-Chem (by 54/BLY 12).

TECHNICAL DATA

Colours

The coating colour depends on the pigment powder or pigment mixture; see Nanten colour map.

Gloss High gloss.

Coverage

The coverage is of about 1.3 l per m² for float-coating layer 3-4 mm.

For priming 0.2 to 0.3 l/m²

For finishing coat 0.35 to 0.45 l/m²

Mixing ratio

(component A) 2 parts by volume of resin, and (component B) 1 part by volume of hardener.

Package

The component A in 10l tin container, component B in 5 l plastic container, or both in 200 l drums.

Application time (+ 20 °C)

About 20 to 30 min when poured on floor Higher temperature reduces the application time.

Curing time

Try to touch 9 h (+ 25°C) and 18 h (+ 15°C). Dry, suitable for light traffic, about 16 h (+ 25°C) and > 24 h (+ 15°C). Fully cured 7 d.

Application method

Spreading with trowel and finish with steel trowel or with mechanical floating machine. Special roller is used for priming and finishing coat.

Dilution

For priming, thin by 10 to 30 %vol. with Nanten A Epoxy Thinner. For float-coating the resin is not thinned. For varnishing, thin by 20 to 40 %vol. with Nanten A Epoxy Thinner.

Tools clean-up

Tool cleaning product, such as ethyl acetate.

Storage

+5°C ... +25°C, storage time up to 6 months. Store in warm, tightly sealed original containers.

TECHNICAL CHARACTERISTICS

Film thickness

Depending on stress conditions, usually 4 to 6 mm. For finishing coat, the coverage shall be at least 0.4 l/m².

Density (at + 25°C)

about 1.06 kg/l

The binder density is

Solids volume content

About 100%vol.

Final hardness

Shore D 72.

Fire rating

B_{FL} -s1, SFS-EN 13501-1

VOC (calculated)

Mixed compound 25 g/l. EU VOC 2004/42/EC (cat A/j) max. 500 g/l (2010).

USAGE INSTRUCTIONS

Requirements for base material and application conditions

Ensure the concrete minimum strength class C25/30 and wear durability class 3. The concrete relative humidity should be below 95% and the surface temperature at least 3°C above the air dew point. Air, surface and coating temperature should be more than +15°C and relative humidity should be below 80%.

New concrete floors

Cement base and any non-cured cement is removed by grinding, blasting or milling. Any loose material is removed and cement dust is carefully vacuumed.

Existing concrete floors

Cement base and deteriorated concrete is removed by grinding, blasting or milling. Any loose material is removed and cement dust is carefully vacuumed. Dirty floors should be washed and rinsed with synthetic detergent base before any other treatment. Old paint film must be completely removed.

Priming

Priming with Nanten HM Epoxy. On damp concrete surfaces, with relative humidity over 95%, use Nanten M Primer suitable for damp concrete. The primer must block all pores of the concrete surface, to ensure uniform film which is dense and intact. The primer is covered with adhesive sand (0.6 to 1.2 mm).

Patching

Small dents and cracks are cleaned and filled with putty consisting of eg HM AR Epoxy and fine sand. For larger fillings, adjustments and inclinations, use the filling/smoothing compound consisting of Nanten HM AR Epoxy and filler sand (0.1 - 0.6 mm)

Mixing the compound components

Premix the HM AR Epoxy component A and component B in their original containers, evaluate the required compound amount, taking into account the area to be coated and the application time. Mix the components right proportions, using low speed mixer for about two minutes, avoiding mixing air to the compound. Add the required amount of selected pigment powder or dye mixture while mixing and continue to mix for about one minute, including the corners of the container. The binder and filler can also be mixed in industrial mixer or concrete mixer.

Application

If the priming is older than two days, the application surface must be roughened and the waste removed. The mixed compound (HM AR + Epoxy pigment) is poured on the floor on continuous trail, and spread by trowel to the layer with desired thickness. Spread by bands so that the surface can be manually finished from dry floor. After spreading, the compound is smoothed manually with steel trowel or mechanically with grinding machine. Consumption for 4 mm film is about 1.3 l HM Epoxy and about 7 kg of filler per m².

Finishing coat

The smoothed coating compound must be varnished when dried with thinned Nanten HM AR Epoxy. Varnishing is recommended in two layers, to ensure easily maintained and hygienic surface.

Skirting boards / bend-ups

Skirting boards are made of the same compound, which is stiffened with fiber material (Sylothix) to facilitate machining. The skirting boards height is at least 100 mm in, either straight or rounded moulding.

Care of coated floors:

See [www.nanten.fi / products / cleaning and care instructions](http://www.nanten.fi/products/cleaning_and_care_instructions).

APPLICATION SAFETY

See [www.nanten.fi / products / safety data sheets](http://www.nanten.fi/products/safety_data_sheets)

CE		
Nanten Oy Teollisuustie 6, FI-04300 Tuusula		
13		
0809 -CPR- 1037		
EN 1504-2:2004		
Coating / screed		
Adhesion resistance	mass loss < 3000	897 mg
Capillary absorption and permeability to water	w < 0,1 kg/m ² x h ^{0,5}	0,01 kg
Impact resistance	class III: ≥ 20	60 Nm
Adhesion strength by pull-off test	≥ 2,0N/mm ²	*2,9 N/mm ²
Reaction to fire B(fl)	Bri-s1	
* murtuma betonissa		

Although the technical specifications of the product description are based on our best knowledge and experience, all the above information must be taken as a guide in all cases. The user must ensure the suitability of the product for the application area. If the instructions are not followed, the user is solely responsible for the possible damages and consequences