EPOKATE HM

Art.-No. 05-S02-150

A two-component solvent- and nonylphenol-free epoxy resin system for trowelled screed and decorative flooring.

Properties

EPOKATE HM is a low-viscous nonylphenol-free, solvent-free, transparent two-component epoxy resin system. Mixed with large quantities of coloured sands or gravel, the product exhibits excellent workability properties upon working with a hand or rotary trowel.

Areas of application

EPOKATE HM can be used:

- as a binder for producing industrial trowelled coloured sand screed with a slip-resistant surface;
- for decorative flooring made with coloured or natural gravel;
- in commercial kitchens, food production areas, showrooms, sales rooms, stairwells, corridors, garages etc.

Technical data

Basis:	two-component epoxy resin (A/F)
Colour:	Transparent
Viscosity (+23° C):	*approx. 280 mPa·s (± 80)*
Density (+23°C):	1.09 g/sm³
Adhesion strength:	>B1.5 according to standard EVS-EN ISO 13892-8:2002
Mixture ratio (resin : hardener):	100 : 48 parts by weight
Pot life (+23° C):	30-40 min
Minimum cure temperature:	+10° C
Overcoating time (+23° C):	8 hours to max 24 hours
Fully cured (+23° C):	7 days
Tensile strength:	exceeds the tensile strength of concrete several times
Cleaning:	clean tools immediately with a suitable epoxy resin solvent.
Packaging:	12 kg
Storage:	18 months when stored in unopened original container under dry conditions at +10 ... +30 °C. Observe regulations for the storage of potential soil and groundwater pollutants.

Note:

At low temperatures, the product may crystallise and turn into an opaque, grease-like mass. Such product can be used within two hours of defrosting in a water-bath at 50…60° C.

Requirements to the surface being coated:

The concrete surfaces should be:

- dry, hard and load-bearing;
- free of dust, loose particles, oil and grease;
- protected against moisture penetrating or rising from beneath the concrete surface;
- strength min C20/25;
- min 28 days old;
- tensile strength ≥ 1.5 N/mm²;
- moisture content below 4%.

The recommended surface treatment methods are sand or bead blasting, diamond grinding or milling.

Product preparation

Component A (resin) and component B (hardener) are delivered in the predetermined mixing ratio. Ensure that the hardener drains completely from its container to the resin container. Mixing of the combined resin system is to be carried out with a suitable mixer for approx. 2 minutes at 300 rpm, mixing both from the bottom and edges of the container. It is important to ensure the hardener is evenly dispersed in the resin component. The minimum temperature during mixing should be +12° C. Decant the mixed material into a larger container and mix through once again for approx. 1 minute. The sand and other fillers added to the mixed material should be dry and at a temperature of min. +12° C.

Methods of application and norms for consumption

1. Trowelled screed – EPOSYST HM

Apply the trowelled screed to a previously primed substrate by EPOKATE KRUNT. To prepare the trowelled screed, combine the EPOKATE HM resin and hardener. Pour the quartz sand into a horizontal mixer (preferrably) and add the homogenised resin system (mixed resin and hardener) during the mixing, observing the mixing ratio given below. Make sure that the filler material and binder are thoroughly combined. Use a combination of coloured sands with of ø 0.4-0.8 mm, 0.8-1.2 mm or 1.0-1.8 mm grain.

Coating thickness 4... 6 mm	
EPOKATE HM	12 kg
Coloured sand	100 kg

Spread the trowelled screed mix immediately on the substrate by squeegee box or by hand with a squeegee that ensures uniform layer thickness. Pack the applied trowelled screed with a hand trowel or a special power rotary trowel machine (e.g. Scanmaskin). Once the trowelled screed layer has cured, impregnate or varnish the floor with an epoxy resin varnish intended for that purpose. Consumption norms per 1 mm of layer thickness are presented in the following table.

Norms for consumption (m²/mm):	
EPOKATE HM	215 g/m²/mm
Coloured sand	1,8 g/m²/mm

2. Decorative coloured gravel mass – EPOSYST KP

First, prime the substrate with EPOKATE KRUNT and apply a bonding spread. Use quartz sand with a decorative finish in the same colour as the bonding spread. Once the primer has cured, remove any loose bonding spread. To prepare the decorative coloured gravel mass, combine the EPOKATE HM resin and hardener. Pour the quartz sand into a horizontal mixer (preferably) and add the homogenised resin system (mixed resin and hardener) during the mixing, observing the mixing ratio given below. Make sure that the filler material and binder are thoroughly combined. Use a combination of natural or coloured gravel of ø 2-4 mm or 4-6 mm grain.

Coating thickness 6... 12 mm	
EPOKATE HM	12 kg
Quartz sand (ø 2-3 or 4-6 mm grain)	100 kg

Spread the decorative coloured gravel mass on the substrate by box or by hand with a squeegee that ensures uniform layer thickness. Pack and smooth out the applied decorative coating mass. Once the decorative mass coating has cured, varnish the floor with an epoxy resin varnish intended for that purpose. Consumption norms per 1 mm of layer thickness are presented in the following table.

Norms for consumption (m²/mm):	
EPOKATE HM	215 g/m²/mm
Quartz sand (ø 2-3 or 4-6 mm grain)	1,8 kg/m²/mm

When using natural or coloured gravel with a grain size of 2-4 mm, take into consideration that the minimum layer thickness is 6-8 mm, but when grain size of 4-6 mm is used, the minimum layer thickness is 10-12 mm.

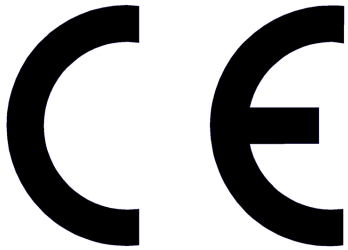
Health and safety

EPOKATE HM is epoxy resin system with no added solvents. As the product is based on an epoxy resin it may cause irritation and even hypersensitivity (allergy) upon skin contact. Hence, suitable protective equipment should be worn while the product is in liquid form to avoid contact with skin. Once reacted (cured), the product is completely harmless. Component B (hardener) is caustic. When handling and working with the product, please observe the safety requirements detailed in the Material Safety Data Sheet. All government health and environmental regulations and directives must also be followed. Product residues are to disposed of under the waste disposal code (epoxy resin).

Notes:

- The temperature of the product, the surrounding air and the substrate should be at least 12 °C, or at least 3 °C above the dew point temperature. Relative humidity must not exceed 80%.
- The bond between individual coats can be affected by the presence of dust or moisture.
- Waiting times between working operations should be at least 12 hours and max. 48 hours at 20 °C. If waiting times are longer than 48 hours, the substrate must be abraded and cleaned thoroughly and a new pore-sealing primer coating must be applied. It is not enough to simply overcoat.

- A fresh coating should be isolated from flowing water and dampness for approx. 8 hours. Dampness in the curing phase produces a white discolouration and unhardened surface.
- Higher temperatures shorten the pot life, accelerate the curing process and waiting times between working operations, whereas lower temperatures increase the pot life, curing time and waiting times between working operations.
- Material consumption rate is also increased at lower temperatures.
- Epoxy resins are not colourfast in general when exposed to UV-light and weather so EPOKATE HM tends to yellow under UV radiation and to carbonise (turn dull white on the surface) in long-term damp conditions. This does not affect the strength or durability of the product. However, it does influence its appearance and cleanability. Hence, it is recommended to always cover EPOKATE HM with a finishing resin coating system (varnish), such as EPOKATE LAKK, EPOKATE LAKK-3 or EPOKATE CHEM.
- EPOKATE HM's temperature resistance is about 65 °C.
- Applications that are not specified in this Technical Data Sheet may only be carried out after consultation with and written approval of the Technical Services Department of Epokate OÜ.
- Epokate OÜ assumes no responsibility for any consequences of a misuse of this product, as the post-market usage and storage conditions of the product are beyond our control.



Epokate OÜ

Savimäe 3, Vahi küla, Tartu vald

Tartumaa 60534

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EN 13813 SR-B1,5

Epoksüvaik põrandakattesüsteem EPOKATE HM

Adhesion strength	≥B1,5
Fire resistance	F
Wear resistance	F
Bending tensile strength	F
Impact resistance	F

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