CEMLINE MG 4 FF H

Highly impermeable reprofiling mortar

- *waterproof*
- *excellent workability*
- *easy to level and finish*
- *very low rebound*
- *fulfils the German potable water requirements according to DVGW W300-5 (P):10-2014, type 2*

Compressive strength	class R4 ≥ 45 MPa
Chloride ion content	≤ 0.05 %
Adhesive bond	≥2.0 MPa
Carbonation resistance	passed
Modulus of elasticity	≥ 20 GPa
Thermal compatibility Part 1: Freeze thaw with de-icing salt immersion	≥ 2.0 MPa
Capillary absorption	≤ 0.5 kg/m²·h$^{0.5}$
Reaction to fire	class A1
Dangerous substances	complies with 5.4

CE
0761

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EN 1504-3:2005/ZA.1a
VANDEX CEMLINE MG 4 FF H
CC repair mortar for structural repair
(based on hydraulic cement)

PRODUCT DESCRIPTION
VANDEX CEMLINE MG 4 FF H is a waterproof cementitious, ready-to-use reprofiling mortar.

AREAS OF APPLICATION
- substrates: concrete
- reprofiling and coating of soffits, walls and slabs
- suitable as smooth finish for drinking water tanks and industrial water installations

PROPERTIES
VANDEX CEMLINE MG 4 FF H is applied in layers of 10 to 15 mm thickness in one working cycle. It is waterproof when applied in min. 8 mm layer thickness. The material has a very dense structure, thus a very low porosity and can easily be flattened.
VANDEX CEMLINE MG 4 FF H is approved for application in contact with potable water and fulfils the corresponding German requirements according to DVGW W300-5 (P):10-2014, type 2.

SURFACE PREPARATION
The substrate to be treated must be sound and even, open-pored, roughened and its surface free from voids, large cracks or ridges. Any adhesion reducing substances like bitumen, oil, grease, remains of paint or laitance must be removed by suitable means.
Thoroughly moisten the substrate, it must be damp but not wet at the time of application. Any surface water on horizontal surfaces must be removed.

MIXING
Mix 25 kg of VANDEX CEMLINE MG 4 FF H with 3–4 litres of tap water in a clean container for at least 3 minutes to a lump-free, homogeneous consistency. Use a mechanical mixer.

APPLICATION
VANDEX CEMLINE MG 4 FF H is usually applied by a fine mortar spraying device, but it can also be applied by trowel. Apply a minimum of 8 mm (approx. 16 kg/m²) and a maximum of 15 mm (approx. 30 kg/m²) in one working cycle. For small areas such as coves or local repairs, VANDEX CEMLINE MG 4 FF H may be applied in layer thicknesses up to 30 mm. If several coats are required it is recommended to apply the next coat whilst the previous coat is still damp at the surface.

Trowel application
First a scratch coat is applied for maximum adhesion to the substrate. Ensure that all cavities in the substrate are filled in order to exclude any trapped air.
On horizontal and slightly inclined surfaces it is possible to apply a bonding bridge with VANDEX BB 75. Apply by brush a small quantity of material into the surface until it is completely moist. The following VANDEX CEMLINE MG 4 FF H layer must be applied wet in wet.

Spray application
VANDEX CEMLINE MG 4 FF H can be applied with a suitable fine mortar spraying device. For maximum spray pattern it should be possible to adjust volume of product as well as air pressure and volume. The nozzle diameter is approx. 10 mm.
The material is applied in a circular motion with the spray nozzle held at a 90° angle to the substrate. The material is then flattened.

Do not apply at temperatures below +5 °C or to a frozen substrate.

CONSUMPTION
Approx. 2 kg/m² of VANDEX CEMLINE MG 4 FF H is required to produce a layer thickness of 1 mm.

CURING
Provide a relative humidity of >85% in enclosed areas. Avoid formation of condensate and water film during the first 7 days after application.
While setting, surfaces exposed to weather must be kept moist for at least 5 days and be protected from extreme weather conditions (e.g. sun, wind, frost). The freshly treated surfaces should be protected from rain for a minimum period of 24 h.

FILLING OF WATER RETAINING STRUCTURES
Filling can take place when the surface treatment has hardened sufficiently, usually not less than 14 days after application. However, if earlier filling is specifically required, filling may be considered after not less than 7 days, provided the surface is thoroughly checked for hardness. A careful cleaning and disinfection prior to the first operation is essential.
Observe national laws and regulations.

PACKAGING
25 kg PE-lined paper bag

STORAGE
When stored in a dry place in unopened, undamaged original packaging, shelf life is 12 months.

HEALTH AND SAFETY
Please refer to Safety Data Sheet on www.vandex.com.

TECHNICAL DATA		CEMLINE MG 4 FF H (R3)*
Appearance		white powder
Grain size $d_{max.}$	[mm]	2
Density of fresh mortar	[kg/l]	approx. 2.25
Application time, 20 °C	[min.]	approx. 45
Curing time, 20 °C	[h]	approx. 3–6
Compressive strength 28 d	[MPa]	approx. 65
Bending tensile strength 28 d	[MPa]	approx. 7
Static modulus of elasticity 28 d	[GPa]	approx. 40
Waterproof 28 d, 1.5 bar (water penetration)	[mm]	3–4

All data is averaged from several tests under laboratory conditions. In practice, climatic variations such as temperature, humidity, and porosity of substrate may affect these values.

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