

Inner coating for drinking water tanks

- according to DVGW W300-5 (P):10-2014, Type I
- according to X_{TWB} DVGW W300-4 (A):10-2014
- low porosity
- applicable by mortar gun

Compressive strength	class R4 ≥ 45 MPa	CE 0761 Vandex Isoliermittel-GmbH Industriestr. 21 DE-21493 Schwarzenbek 19 153 EN 1504-3:2005/ZA.1a CC fine mortar for non structural repair (based on hydraulic cement)
Chloride ion content	≤ 0.05%	
Adhesive bond	≥ 2.0 MPa	
Carbonation resistance	NPD	
Modulus of elasticity	≥ 20 GPa	
Thermal compatibility		
Part 1: Freeze thaw with de-icing		
salt immersion	≥ 2.0 MPa	
Part 4: Dry thermal cycling	≥ 2.0 MPa	
Capillary absorption	≤ 0.5 kg/m ² ·h ^{0.5}	
Reaction to fire	class A1	
Dangerous substances	complies with 5.4	

PRODUCT DESCRIPTION

VANDEX CEMLINE FS GREY is a cementitious, ready-mixed coating.

AREAS OF APPLICATION

- substrates: concrete or VANDEX CEMLINE MG 4 or VANDEX CEMLINE MG 4 FF
- drinking water structures, water treatment plants, water sourcing, etc.
- water contact zone (e.g. walls, floor, columns, ceiling)

PROPERTIES

Owing to its composition of cement, quartz with graded grain size distribution and selected additives, VANDEX CEMLINE FS GREY is specifically intended for use in drinking water tanks.

It has excellent adhesion to mineral substrates, and can be applied both to vertical and horizontal surfaces. It is durable, resistant to frost and heat after setting, but all the same permeable to vapour. VANDEX CEMLINE FS GREY is tested for use in drinking water structures.

SURFACE PREPARATION

The substrate to be treated shall 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 shall be removed by suitable means.

Water leaks must be stopped e.g. with the VANDEX PLUG. Thoroughly moisten the substrate, it shall be damp but not wet at the time of application. Any surface water on horizontal surfaces shall be removed.

MIXING

Mix 25 kg of VANDEX CEMLINE FS GREY with 3.75-4.75 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 FS GREY is applied with trowel or suitable spray equipment.

A maximum of 2 mm (approx. 4 kg/m²) can be applied in one working cycle. In most cases the application of more than one coat is recommended; please refer to relevant specification.

It is recommended to apply the next coat whilst the previous coat is still damp on the surface. The previous coat shall not be damaged during application of the following coat. The waiting time before applying the following coat depends on local climatic conditions such as humidity, temperature, etc. The previous coat shall be textured by suitable means whilst still plastic to form a key. To maintain workability of the material do not add water, simply re-stir the mixture.

Trowel application

First a scratch coat is applied for maximum adhesion to the substrate, working from the bottom up. Ensure that all cavities in the substrate are filled in order to exclude any trapped air.

Spray application

VANDEX CEMLINE FS GREY 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. 6 mm.

The first layer of Vandex is applied in a circular motion with the spray nozzle held at a 90° angle to the substrate. The material is then flattened and keyed. The final layer can be left as a spray finish or treated to a specified finish.

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

CONSUMPTION

Recommended overall application rate: 6-8 kg/m² (approx. 3-4 mm).

Note: Substrate and application conditions shall be observed. Depending on surface roughness, consumption may vary.

CURING

Provide a relative humidity of > 85% in enclosed areas. Avoid formation of water films or condensation on top of coating during 7 days after application.

Keep surfaces exposed to weathering damp for at least 5 days and provide suitable protection against extreme weather conditions (e.g. sun, wind, frost) while setting. 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		
Appearance		grey powder. VANDEX CEMLINE FS GREY is not a decorative material.
Density of wet mix	[kg/l]	approx. 2.2
Workability at 20 °C	[min]	approx. 45
Setting time at 20 °C	[h]	approx. 3-5
Compressive strength 28 d	[MPa]	50-60
Bending tensile strength 28 d	[MPa]	7-8
Static modulus of elasticity 28 d	[GPa]	36-38
Capillary absorption	[kg/m ² ·h ^{0.5}]	0.15-0.17
Total porosity 90 d	[Vol.%]	< 8
Capillar porosity 90 d	[Vol.%]	< 5
Further data		refer to CE marking
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.		

The information contained herein is based on our long-term experience and the best of our knowledge. We can, however, make no guarantee since for a successful outcome, all circumstances in an individual case must be taken into consideration. Indications of quantities required are only averages which in certain cases might be greater.