

### **Fibre reinforced spray and repair mortar**

- waterproof
- low shrinkage
- excellent workability
- low rebound
- fulfils the German potable water requirements according to DVGW W300-5 (P):10-2014, type 2

Compressive strength	class R4 $\geq$ 45 MPa	<b>CE</b> 0761
Chloride ion content	$\leq$ 0.05 %	
Adhesive bond	$\geq$ 2.0 MPa	Vandex Isoliermittel-GmbH Industriestr. 21 DE-21493 Schwarzenbek 09 155 EN 1504-3:2005/ZA.1a CC repair mortar for structural repair (based on hydraulic cement)
Carbonation resistance	passed	
Modulus of elasticity	$\geq$ 20 GPa	
Thermal compatibility		
Part 1: Freeze thaw with de-icing salt immersion	$\geq$ 2.0 MPa	
Part 4: Dry thermal cycling	$\geq$ 2.0 MPa	
Capillary absorption	$\leq$ 0.5 kg/m <sup>2</sup> · h <sup>0.5</sup>	
Reaction to fire	class A1	
Dangerous substances	complies with 5.4	

### **PRODUCT DESCRIPTION**

VANDEX CEMLINE MG 4 is a waterproof, cementitious, ready-mixed fibre reinforced spray mortar.

### **AREAS OF APPLICATION**

- reprofiling and coating of concrete surfaces
- reprofiling of localised concrete defects
- horizontal, vertical and overhead application

### **PROPERTIES**

Owing to its composition of cement, quartz with graded grain-size distribution, fibres and selected additives VANDEX CEMLINE MG 4 is a low shrinkage spray mortar with low rebound and good freeze / thaw resistance. The modification with fibres results in an increased resistance against dynamic load and shear stress. It is waterproof when applied in min. 8 mm thickness.

VANDEX CEMLINE MG 4 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. Water leaks must be stopped e.g. with VANDEX PLUG. 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 with 3.5-4.5 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 is usually applied with suitable spray equipment but it can also be applied by trowel. Apply a minimum of 6 mm (approx. 12 kg/m<sup>2</sup>) and a maximum of 30 mm (approx. 60 kg/m<sup>2</sup>) in one working cycle. For small areas such as coves or local repairs VANDEX CEMLINE MG 4 may be applied in layer thicknesses up to 50 mm. If several coats are required it is recommended to apply subsequent coat whilst previous coat is still damp at the surface. The previous coat must 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 must 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. Ensure that all cavities in the substrate are filled in order to exclude any trapped air.

### Spray application

VANDEX CEMLINE MG 4 can be applied with a suitable fine mortar spraying device. For maximum spray pattern and minimum rebound it should be possible to adjust volume of product as well as air pressure and volume. The nozzle diameter is approx. 10-14 mm. The first layer is applied in circular motion with the spray nozzle held at a 90° angle to the substrate. The material is then flattened and trowelled or keyed for a further layer.

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

### **CONSUMPTION**

Approx. 2 kg/m<sup>2</sup> VANDEX CEMLINE MG 4 is required to produce a layer thickness of 1 mm.

### **CURING**

Keep 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.

### **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](http://www.vandex.com).

<b>TECHNICAL DATA</b>		
Appearance		grey powder
Aggregate size $d_{max.}$	[mm]	2
Density of wet mix	[kg/l]	approx. 2.3
Workability at 20 °C	[min.]	approx. 45
Setting time at 20 °C	[h]	approx. 2-4
Compressive strength 28 d	[MPa]	approx. 70
Bending tensile strength 28 d	[MPa]	approx. 8
Static modulus of elasticity 28 d	[GPa]	approx. 38
Waterproof 28 d, 1.5 bar (water penetration)	[mm]	3-4
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.