


### Crystalline waterproofing

- in-depth waterproofing and protection slurry
- permanent active
- applied to pressure or non-pressure concrete face
- approved for drinking water structures
- light grey

 0761 Vandex Isoliermittel-GmbH Industriestr. 19-23 DE-21493 Schwarzenbek 13 004 EN 1504-3:2005	EN 1504-3: ZA.1a CC fine mortar for non-structural repair (based on hydraulic cement)	
	Compressive strength Chloride ion content Adhesive bond Carbonation resistance Modulus of elasticity Thermal compatibility: Part 4: Dry thermal cycling Capillary absorption Reaction to fire Dangerous substances	class R3 $\geq$ 25 MPa $\leq$ 0.05% $\geq$ 0.8 MPa passed $\geq$ 15 GPa $\geq$ 0.8 MPa $\leq$ 0.5 kg/m <sup>2</sup> ·h <sup>0.5</sup> class A1 complies with 5.4

### PRODUCT DESCRIPTION

VANDEX CONCRETE GREY is a cementitious, ready-mixed product providing in-depth waterproofing where a light grey color similar to aged concrete is desired.

### AREAS OF APPLICATION

- substrate: concrete
- active or passive waterproofing and protection against water and moisture
- foundations, slabs, retaining walls, construction joints, swimming pools, backfilled structural elements, etc.
- drinking water structures

### PROPERTIES

It consists of Portland cement, specially treated quartz sand and a compound of active chemicals.

When VANDEX CONCRETE GREY is applied to a concrete surface the active chemicals combine with the free lime and moisture present in the capillary tract, to form insoluble crystalline complexes. These crystals block the capillaries and minor shrinkage cracks in the concrete to prevent any further water ingress (even under pressure). However, the Vandex layer will still allow the passage of water vapour through the structure (i.e. the concrete will still be able to "breathe"). VANDEX CONCRETE GREY is tested for use in contact with drinking water.

### 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 have to 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 by volume 5 parts of VANDEX CONCRETE GREY with approx. 2 parts of tap water (25 kg + approx. 7.5–8 litres) in a clean container for at least 3 minutes to a lump-free, homogeneous consistency of thick oil paint. Use a mechanical mixer.

### APPLICATION

VANDEX CONCRETE GREY is applied with brush, suitable spray equipment or by dry sprinkling.

#### Brush application

Ensure that all cavities in the substrate are filled. Crosswise application: vertically bottom-up, then horizontally.

#### Spray application

VANDEX CONCRETE 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. 4 mm. The first layer of Vandex is applied in circular motion with the spray nozzle held at a 90° angle to the substrate. The final layer can be left as a spray finish or treated to a specified finish.

Apply subsequent coat whilst previous coat is still damp at the surface. The waiting time before applying the following coat depends on local climate conditions such as humidity, temperature, etc. The previous coat must not be damaged during application of the following coat.

To maintain workability of the material do not add water, simply re-stir the mixture.

#### Dry sprinkle and power trowel application

The concrete is poured, vibrated and screeded as usual. When the concrete to be treated starts to reach initial set, the specified amount of VANDEX CONCRETE GREY is dry-distributed by hand using a sieve (mesh size of 1 mm) or suitable spreader on to the concrete surface. The powder is then trowelled into the substrate until coverage is uniform and the specific finish is achieved.

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

### 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 surface should be protected from rain for a minimum period of 24 h. In closed spaces and deep pits, suitable air circulation should be provided for 24 hours following the VANDEX CONCRETE GREY treatment.

## BACKFILLING

Backfilling can be carried out 3 days after completion of the Vandex treatment.

## PLASTERING/COATING

Surfaces treated with Vandex products which are to be coated or painted should be left to cure for at least 28 days.

At the end of the curing period, prior to the application of coatings or paints, the surfaces should be saturated with water and neutralised with diluted hydrochloric acid (1:8 / approx. 3.5%). Observe precautionary measures! Following this, the area must be thoroughly rinsed with water.

When a plaster or render finish is required on top of a Vandex treatment it is essential to apply a rough cast of sand and cement on the final Vandex coat while it is still tacky. On hardened Vandex surfaces apply an appropriate bonding agent before rendering.

Coatings on top of a Vandex treatment have to be alkali resistant. Decorative coatings applied on the passive water pressure side are recommended to be water vapour permeable.

## 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

VANDEX CONCRETE GREY contains cement. Irritating to respiratory system and skin. Risk of serious damage to eyes. – Keep out of reach of children. Do not breathe dust. Avoid contact with skin and eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable gloves and eye/face protection. If swallowed, seek medical advice immediately and show this container or label. – For further information please refer to Material Safety Data Sheet on [www.vandex.com](http://www.vandex.com).

## CONSUMPTION

STRUCTURAL ELEMENT	TYPE OF IMPACT	TYPE OF APPLICATION	CONSUMPTION
Concrete slab	positive or negative water pressure	dry sprinkle, brush or spray in 1 coat	1.2 kg/m <sup>2</sup>
Concrete slab	moisture / no water pressure	brush or spray in 1 coat	0.8 kg/m <sup>2</sup>
Concrete walls	positive or negative water pressure	brush or spray in 2 coats	1.5 kg/m <sup>2</sup>
Construction joints (horizontal and/or vertical)	water pressure	brush in 1 coat	1.5 kg/m <sup>2</sup>

For details please refer to specifications.

TECHNICAL DATA		
Appearance		light grey VANDEX CONCRETE GREY is not a decorative material.
Workability at 20 °C	[min]	approx. 30
Setting time at 20 °C	[h]	2–3
Further data		refer to CE-marking

All data are averages of 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.

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