

AL ZAMIL الزامل
Industry, Trade & Transport للصناعة و التجارة و النقل



Crystalline waterproofing

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



Compressive strength	class R3 ≥ 25 MPa	CE 07 61
Chloride ion content	≤ 0.05%	
Adhesive bond	≥ 0.8 MPa	Vandex Isoliermittel-GmbH Industriestr. 19-23 DE-21493 Schwarzenbek 09 001 EN 1504-3:2005 /ZA.1a CC fine mortar for non-structural repair (based on hydraulic cement)
Carbonation resistance	no performance determined	
Modulus of elasticity	≥ 20 GPa	
Thermal compatibility:		
Part 4: Dry thermal cycling	≥ 0.8 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 SUPER is a cementitious, ready-mixed, in-depth waterproofer. VANDEX SUPER is based on grey Portland cement.

AREAS OF APPLICATION

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

PROPERTIES

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

When VANDEX SUPER 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"). In addition to waterproofing the structure, VANDEX SUPER protects concrete against sea water, waste water, aggressive ground water and certain chemical solutions. VANDEX SUPER 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 SUPER with approx. 2 parts of tap water (25 kg + approx. 7–8.5 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 SUPER 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 SUPER 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 SUPER 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 SUPER 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

Please refer to Safety Data Sheet on 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 ²
Concrete slab	moisture / no water pressure	brush or spray in 1 coat	0.8 kg/m ²
Concrete walls	positive or negative water pressure	brush or spray in 2 coats	1.5 kg/m ²
Construction joints (horizontal and/or vertical)	water pressure	brush in 1 coat	1.5 kg/m ²

For details please refer to specifications.

TECHNICAL DATA	
Appearance	grey powder. VANDEX SUPER is not a decorative material.
Workability at 20 °C [min]	approx. 30
Setting time at 20 °C [h]	1–2
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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WDS001E1214

Cementitious waterproof plugging compound

- stops flowing water
- sets in seconds
- durable

PRODUCT DESCRIPTION

A cementitious, ready-mixed, rapid setting compound to stop water and moisture ingress.

AREAS OF APPLICATION

VANDEX PLUG can be used internally or externally as a waterproof plugging mortar or where rapid setting and early strength gain is required:

- Plugging water leaks and seepage
- Sealing leaking cracks
- Sealing wet surfaces
- Plugging leaks in earthenware pipes
- Caulking tunnel segment joints
- Fixings in water structures where immediate use is required
- Installation of steel elements in concrete or masonry (e.g. rail stanchions)
- Erosion resistant mortar for elements affected by rain
- Erosion resistant shoring of canal sealing
- Underwater work (access permitting)

VANDEX PLUG can be used on the following substrates:

- concrete
- masonry
- earthenware
- stone

PROPERTIES

VANDEX PLUG has the following physical properties:

- Stops water flow
- Sets in approx. 30 seconds after mixing
- Durable
- Can be used underwater
- Can be mixed with water or used dry
- Easy application
- Packaged in easy to use, resealable containers

SURFACE PREPARATION

The substrate must be clean, sound and free of any surface contamination. Leaks must be cut out back to sound material, leaving an appropriate chase for receiving the VANDEX PLUG.

MIXING

Setting time is dependent largely on the amount of mixing water used. Standard value is (at 20 °C):

1 kg VANDEX PLUG and approx. 0.25 liter of water. The VANDEX PLUG must be added to the water and mixed swiftly. Mixing time is about 15 seconds.

After mixing setting in about 30 seconds.

In cold weather, use lukewarm water. In higher temperatures, use cold water.

APPLICATION

To avoid wastage, only small quantities of VANDEX PLUG should be mixed.

- After mixing, apply the VANDEX PLUG to the appropriate area immediately. Work the mixture well into the area and then hold firmly in place for about 30 seconds. (Wear rubber gloves).
- Maintain pressure without disturbing the material, until it has set.
- Remove excess material.
- After lightly prewetting apply a normal VANDEX waterproofing coating.

In certain circumstances VANDEX PLUG may be applied as a dry powder.

Place and hold the powder directly over the leak for 30–40 seconds.

CONSUMPTION

Depending on the size of the water leak: approx. 0.3 kg/ water leak.

PACKAGING

15 kg plastic, resealable buckets
5 kg plastic, resealable buckets

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		
Aggregate state		powder
Colour		grey
Bulk density, 25 °C	[kg/l]	about 1.2
Components		1 component
Application temperatures	[°C]	+5 to +25 °C (allow for mixing water and substrate temperatures)
Application time	[sec]	about 30 (after mixing)
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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