

## DESCRIPTION

**VANDEX UNI MORTAR 1** is a cementitious, ready-mixed waterproofing and repairing mortar.

- Against active or passive water pressure
- For horizontal and vertical surfaces
- Resistant to frost and deicing salts
- Applicable by mortar gun

## AREAS OF APPLICATION

- Substrate: concrete, masonry and natural stonework
- Waterproofing and protection against water and moisture
- Horizontally and vertically applicable mortar
- for waterproofing, levelling and reprofiling
- Fillets for wall-floor junctions
- Foundations, slabs, retaining walls, etc.
- Drinking water structures.

## PROPERTIES

VANDEX UNI MORTAR 1 is applied in layers of 6 to 12 mm thickness in one working cycle. This material is substantially resistant to abrasion and deicing salt and thus capable of taking strong mechanical wear. Due to its composition, based on cement and quartz with graded grain size distribution, and selected additives. VANDEX UNI MORTAR 1 is waterproof. It is durable and resistant to frost after setting, and at the same time vapour permeable. VANDEX UNI MORTAR 1 is tested for use in contact with drinking water.

## TECHNICAL DATA

| PROPERTY                     | TEST METHOD | VALUES AT 25° C                                 |
|------------------------------|-------------|---|
| Appearance                   | -           | Grey Powder                                     |
| Aggregate size $d_{max}$     | -           | 2 mm  |
| Density of wet mix           | -           | ~ 2.10 Kg/Ltr                                   |
| Workability at 20 °C         | -           | Approx. 45 minutes                              |
| Setting time at 20 °C        | -           | 5 – 6 hours                                     |
| Compressive Strength         | ASTM C109   | $\geq 40 \text{ N/mm}^2$ @ 28 Days              |
| Bending tensile strength     | -           | ~ 6 N/mm <sup>2</sup>                           |
| Static modulus of elasticity | EN 13412    | ~ 24 N/mm <sup>2</sup>                          |
| Bond Strength                | EN 1542     | $\geq 2.0 \text{ N/mm}^2$ @ 28 Days             |
| Capillary absorption         | EN 13057    | $\leq 0.08 \text{ kg/m}^2 \cdot \text{h}^{0.5}$ |

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.

## 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 / SPEED 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.

### **Brick- and blockwork substrates**

Any remaining plaster, render or other substances that could inhibit bonding must be removed back to the substrate. Gypsum, remains of wood or other foreign material must be removed by appropriate means. Loose pointing must be routed out and the substrate cleaned thoroughly.

## **MIXING**

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Mix 25 kg of VANDEX UNI MORTAR 1 with 3–4 liters of tap water in a clean container for at least 3 minutes to a lump-free, homogeneous consistency. Use a mechanical mixer.

## **APPLICATION**

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VANDEX UNI MORTAR 1 is applied with trowel or suitable spray equipment.

Apply a minimum of 6 mm (approx. 12 kg/m<sup>2</sup>) and a maximum of 12 mm (approx. 24 kg/m<sup>2</sup>) in one working cycle.

For small areas such as coves, fillets, local repairs and shutter tie holes VANDEX UNI MORTAR 1 may be applied in layer thicknesses exceeding the above value. Pour VANDEX UNI MORTAR 1 over **horizontal** surface, then compact and strike off. After initial hardening it can be trowelled or provided with a broom finish to increase the non-skid quality. Apply VANDEX UNI MORTAR 1 to **vertical** surfaces like normal render. If several coats are required, it is recommended to apply the next coat whilst the previous coat is still damp at the surface.

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 the 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 UNI MORTAR 1 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 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 trowelled or keyed for a further layer.

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

## **CURING**

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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.

## **PLASTERING/COATING**

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

## PACKAGING

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25 kg PE-lined paper bag

## STORAGE

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

## HEALTH AND SAFETY

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VANDEX UNI MORTAR 1 contains cement. Irritating to 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.

For further information please refer to actual Material Safety Data Sheet.

## CONSUMPTION

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| TYPE OF WATER IMPACT | RECOMMENDED APPLICATION RATE | LAYER THICKNESS   |
|----------------------|------------------------------|-------------------|
| Pressure less water  | 12 – 16 kg/m <sup>2</sup>    | approx. 6 – 8 mm  |
| Water under pressure | 16 – 24 kg/m <sup>2</sup>    | approx. 6 – 12 mm |

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(VANDEX UNI MORTAR 1

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