

Application Guidelines

Vandex BB 75

1. Preparation of Substrate

Substrates to receive VANDEX BB 75 treatment must have a clean and well keyed surface to ensure maximum bonding. Surfaces to be waterproofed should be examined for structural defects, and unacceptable conditions reported and remedied. Remove all cement laitance, shutter release agent, curing compound, loose particles, etc., by means of light wet or dry sandblasting, or high pressure water jetting. Water leaks must be controlled in accordance with the VANDEX PLUG Application Guidelines. Remove all protrusions and cut back to a sound substrate, chasing out any honeycombed or damaged areas. Construction joints and shrinkage cracks exceeding 0.3 mm should be routed out to a minimum depth of 20 mm. Shutter tie holes should be roughened. Clean all chased out areas, shutter-tie holes, etc., and pre-water until the substrate is saturated. Following this, fill the areas with VANDEX UNI MORTAR 1 in layers, the number of which will depend on the total layer thickness required.

Unless the substrate is particularly sound the application of a render is recommended prior to application of Vandex BB75. Onto the pre-wetted walls (to control suction) apply nominal 10 mm thick 3:1 sand:cement render (sand to BS 1199, Table 1). The render should be compacted onto the wall and left with an open textured finish, such as that left by a wood float. The use of sulphate-resisting cement is recommended unless sulphate levels are excessive, in which case Vandex Anti-Sulphate should be used. Substrates with excessive suction must be thoroughly saturated and the surface allowed to dry. In excessive suction conditions, prime with an SBR or acrylic bonding agent. The use of an SBR additive is recommended. Extremely dense surfaces, or those which have little or no suction, should also be primed with a bonding agent. Allow the render to cure for at least 24 hours before applying Vandex BB75.

2. Pre-watering

Prior to applying VANDEX BB 75, carefully rinse all the surfaces to be waterproofed and pre-water with clean water. Pre-water several times so that the concrete is thoroughly saturated. When VANDEX BB 75 is applied, the surface should be damp but not wet. Any surface water must be removed.

3. Mixing

Place 25 kg of VANDEX BB 75 in a clean container and add 5 - 5.75 litres of water for brush or trowel application, or 5.75 - 6.25 litres of water respectively for spray application. Stir for at least 3 minutes with a mechanical mixer. Start by adding less water than that required, and then slowly add more water until the required consistency is achieved.

4. Climatic Conditions

Do not apply VANDEX BB 75 at temperatures below 5 °C (40 °F) or to a frozen substrate.

5. Layer Thickness

Minimum layer thickness per layer: 1.5 mm
Maximum layer thickness per layer: 2.0 mm
Maximum build-up thickness in total: 5.0 mm

6. Application Methods

6.1 Brush Application

VANDEX BB 75 can be applied using a suitable brush (e.g. mason's brush). It should be applied from the bottom upwards, at which point the excess material is worked sideways. Ensure that all cavities in the substrate are filled in order to exclude any trapped air.

VANDEX BB 75 is applied in one or two layers as specified. If two layers are applied it is recommended that the second layer is applied whilst the first layer is still damp on the surface. The waiting time before applying the second layer is approx. 2 - 4 hours, depending on local climatic conditions such as humidity, temperature, etc. The first layer must be sufficiently hardened so as not to be damaged during application of the second layer.

It is important when applying by brush that the correct thickness of material is applied – the brush should be used as a soft trowel, not as a paint brush.

6.2 Trowel Application

A scrape coat of VANDEX BB 75 is applied with a steel trowel for maximum adhesion to the substrate, working from the bottom up. All cavities and air holes must be filled in this first step of the work, thereby excluding trapped air. This is immediately followed by the first layer applied to the specified thickness.

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6.3 Spray Application

VANDEX BB 75 can be applied with a suitable fine mortar spraying device. The amount of material required and the air used must be adjustable so that the optimum spray pattern can be achieved. The nozzle diameter should be approx. 6 mm, depending on the spray gun used. The compressor performance must be at least 5 bar pressure, delivering 500 l/min.

The first layer of VANDEX BB 75 is applied using a circular motion with the spray nozzle held at a 90° angle to the substrate. The distance between the spray nozzle and the surface will depend on the spray gun and compressed air used. The material is then flattened with a suitable trowel. This operation levels the surface and increases adhesion to the substrate.

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The final layer can be left direct as a spray finish or smoothed finely with the trowel. The spray finish provides an "orange peel" type texture which is easy to clean.

7. Consumption

Ground conditions	Minimum thickness	Approximate minimum quantity of layer to be applied
Ground moisture	1.5 mm	3 kg/m ²
Pressureless surface water and seepage	2.0 mm	4 kg/m ²
Hydrostatic pressure	3.0 mm	6 kg/m ²

Please refer to the relevant Vandex product specifications for more detailed information.

8. Curing and Protection

VANDEX BB 75 is cement-based and will cure and harden in the same way as ordinary concrete. Setting and hardening will depend on the surrounding temperature and humidity. For maximum effectiveness from the applied VANDEX BB 75, it is essential that the layers are kept damp for at least 5 days and protected against evaporation by sun and wind. Careful post-watering should be carried out at intervals, starting the day following the application. Alternatively, the surfaces can be covered with plastic sheeting, wet mats or moist sand. The use of curing compounds is not recommended as it may cause problems with the bonding of subsequent coats. The freshly treated surfaces should be protected from rain for a minimum period of 24 hours. Surfaces treated with VANDEX BB 75 should be protected from frost for at least 5 days. If necessary, cover with insulation mats. Air conditioning, heating or dehumidification should not be introduced for at least 28 days.

Sometimes shortly after application the coating of Vandex BB 75 can appear to sweat, giving the impression of water penetration. This is simply water vapour in the air condensing onto the surface, usually caused by the high moisture levels created within the area whilst the application and curing of the coatings takes place. This can also be exacerbated with the introduction of screeds etc., which will also introduce moisture into the air as they cure. This condensation will normally reduce once heating and ventilation have been introduced.

9. Decoration, Coating and Tiling

All surfaces treated with VANDEX BB 75 that are to be coated or painted must be left to cure for at least 4 weeks. When a plaster or render finish is required on top of the applied VANDEX BB 75, apply a thin rough cast of sand and cement on the final VANDEX BB 75 layer when it has reached initial set. If this is not practical, carefully clean the hardened VANDEX BB 75 surface and apply an appropriate bonding agent (e.g. SBR or acrylic) prior to rendering.

Areas below ground level are prone to condensation and obviously this will usually occur on the coolest surface (which would normally be the VANDEX BB 75 coating.) This condensation would affect gypsum-based plasters. However, no incompatibility exists between VANDEX BB 75 and gypsum-based plasters. It is important that when a finishing plaster is applied directly onto the VANDEX BB 75 steps are taken to ensure that condensation does not cause problems.

Cementitious tanking systems are vapour permeable. As vapour movement is usually from within the basement out towards the ground, this is an advantage. There may be occasions however when the vapour movement is reversed and it moves from the ground into the basement. It is important to ensure that any decorative covering over the tanking system is sufficiently vapour permeable to prevent a build-up of humidity behind the covering. If it is not, interstitial condensation could occur within the plaster layer supporting the decoration, resulting in bubbling and peeling of the covering. It is generally appreciated that gloss paints should not be used over a tanking system, but it is commonly thought that water-based emulsion paints are acceptable. Advanced paint technology, however, has resulted in much higher binder/pigment ratios, (e.g. vinyl matt). The higher the binder/pigment ratio, the higher the vapour resistance of the paint. Problems may therefore be experienced when these paints are used and they should be avoided in

basements. Trade matt emulsions have a lower binder/pigment ratio and a high vapour permeability which means that residual moisture in new plaster can escape. Mineral paints, which combine with the surface of mineralic substances such as plaster or render, also have high vapour permeability. Either of these paint types is recommended for use in basements. As a guide, if the paint is suitable for use over new (damp) plaster it is also suitable for use over VANDEX BB 75. If in doubt, the paint manufacturer should be contacted.

Finally, the air needs to be conditioned and circulated to ensure that the relative humidity falls within acceptable levels. This can often be achieved by providing adequate ventilation. If this is not done, moisture introduced into the basement by people, boiling kettles, etc., will allow the humidity to build up to levels exceeding those considered advisable for the chosen environment. Very often, the achievement of both temperature and relative humidity control is combined in an air conditioning system.

10. Backfilling

Backfilling can be carried out 3 days after completion of the VANDEX BB 75 application. If there is a risk that the layer of VANDEX BB 75 will be damaged during back-filling (sharp-edged material), then it must be protected by suitable means.

11. Filling of Water Retaining Structures

In accordance with standard water industry practice, particular note needs to be taken of the following points:

- Clean all surfaces (ceiling, walls, slab, columns, stairs, etc.) with drinking water (do not use high pressure)
- Remove all cleaning water
- Disinfect all internal surfaces with approved disinfectants
- Remove all disinfectant

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.

12. Health and Safety

VANDEX BB 75 contains cement, which is irritating to eyes and skin. It may cause sensitization by skin contact. Keep out of reach of children. 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. For further information please refer to Material Safety Data Sheet.