

Application Guidelines

Related Product Information

- Data Sheet: VANDEX POLYCEM Z
- Material Safety Data Sheet: VANDEX POLYCEM and VANDEX POLYCEM LIQUID

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1. Preparation of Substrate

Concrete to receive VANDEX POLYCEM Z treatment must have a clean surface to ensure maximum bonding. Surfaces to be coated 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, high pressure water jetting or wire brushing.

Water leaks must be stopped in accordance with the VANDEX PLUG Application Guidelines.

Remove all protrusions and cut back to sound concrete, 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 concrete is saturated. Following this, fill the areas with VANDEX UNI MORTAR 1 Z in layers, the number depending on the total layer thickness.

2. Surface Preparation

The substrate to be treated must be sound and even, open-pored and its surface free from voids, large cracks or ridges. Bitumen, oil, grease, remains of paint, laitance and unsound concrete have to be removed by suitable means (e.g. water jetting, sand blasting). The substrate may be slightly damp, but must not be saturated with water.

3. Mixing

Before use, shake the liquid component well.

Mix 25 kg of VANDEX POLYCEM (dry component) with 4.5 kg VANDEX POLYCEM LIQUID in a clean container for at least 3 minutes to a lump-free, homogeneous consistency. Use a mechanical mixer. Where site conditions require, rinse the container with clean water and add it to the mixture.

4. Climatic Conditions

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

5. Layer Thickness

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

6. Applications Methods

6.1 Trowel application

A scrape coat of VANDEX POLYCEM Z 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 work, thereby excluding trapped air. The first layer is then applied to the specified thickness. VANDEX POLYCEM Z is applied in one or two layers as specified. If two layers are applied it is recommended that the second layer be applied whilst the first layer is still tacky. The waiting time before applying the second layer is approx. 2–4 hours, but depends on local climatic conditions such as humidity, temperature, etc. The first layer must not be damaged during application of the second layer.

6.2 Spray application

VANDEX POLYCEM Z can be applied with a suitable fine mortar spraying device. The equipment required and the air used must be adjustable so that the optimum spray pattern can be achieved.

The nozzle diameter is approx. 6 mm but depends on the spray gun used.

The compressor performance must be at least 5 bar pressure, delivering 500 l/min.

A spraying device working with the peristaltic pump method is also suitable.

The first layer of VANDEX POLYCEM Z is applied using a circular motion with the spray nozzle held at 90° angle to the substrate. The distance between the spray nozzle and the surface will depend on the spray gun/compressor used.

The material is then flattened with a suitable trowel. This operation levels the surface and increases adhesion to the substrate.

VANDEX POLYCEM Z is applied in one or two layers as specified. If two layers are applied it is recommended that the second layer be applied whilst the first layer is still tacky. The waiting time before applying the second layer is approx. 2–4 hours, but depends on local climatic conditions such as humidity, temperature, etc. The first layer must not be damaged during application of the second layer.

In addition, it is recommended that the first layer is textured slightly using a suitable soft brush (e.g. wallpapering brush) whilst still plastic. This ensures maximum adhesion between the layers.

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.

7. Consumption

2 kg/m² VANDEX POLYCEM Z are required per millimetre of layer thickness. E.g. layer thickness of 3 mm corresponds to a consumption of 6 kg/m².

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

8. Curing and Protection

The rate of setting and hardening will depend on the surrounding temperature and humidity.

For maximum effectiveness from your VANDEX POLYCEM Z treatment, it is essential that the layers are protected against evaporation by sun and wind for at least 5 days.

Subsequent treatment must take place in such a way that the VANDEX POLYCEM Z layer is able to dry out completely before it comes into contact with water. Provide a relative humidity of 40–60% and a good air exchange in enclosed areas. Avoid formation of water films or condensation on top of coating 7 days after application. The use of curing compounds is not recommended.

Surfaces treated with VANDEX POLYCEM Z should be protected from frost for at least 5 days. If necessary, cover with insulation mats.

9. Painting

All surfaces treated with VANDEX POLYCEM Z, which are to be coated or painted, must be left to cure for at least 4 weeks.

The paint must be water vapour permeable and alkali resistant.

10. Backfilling

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

11. Health and Safety

VANDEX POLYCEM Z 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. Provide good ventilation if handling bigger quantities or in enclosed areas.

For further information please refer to Material Safety Data Sheet of VANDEX POLYCEM and VANDEX POLYCEM LIQUID.

The information contained herein is based on our longterm 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.