POLYCEM Z 1K

Compressive Strength	class R3 ≥ 25
MPa Chloride ion content	≤ 0.05%
Adhesive bond	≥ 2.0 MPa
Carbonation resistance	passed
Modulus of elasticity	≥ 20 GPa
Thermal compatibility Part 1: Freeze thaw with de-icing salt immersion	≥ 2.0 MPa
Capillary absorption	≤ 0.5 kg/m²·h^{0,5}
Reaction to fire	class E
Dangerous substances	complies with 5.4

CE

0761

Vandex Isoliermittel-GmbH
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647
EN 1504-3:2005/ZA.1a
PCC repair mortar for structural repair
(based on hydraulic cement)

Surface protection coating against biogenic sulfuric acid attack

- suitable for sulfuric acid loads as in municipal and agricultural areas
- according to DIN 19573:2016-03, Annex A
- water impermeable
- resistant to municipal sewage water

MATERIAL

- 1-component PCC waterproofing coating
- graded sieve line to the level of cementitious binder
- applicable manually and with spray equipment
- high bond strength
- free of VOC

AREAS OF APPLICATION

- for concrete and masonry surfaces
- surface protection for horizontal, vertical and overhead applications
- waterproofing of sewage water facilities against positive side water pressure
- liquid manure and rainwater overflow tanks
- sewers, reservoirs and shafts containing sewage water
- sewage treatment plants

SURFACE PREPARATION

The substrate to be treated shall be sound and even, open pored, roughened and its surface shall be free from voids, large cracks or ridges. Any adhesion reducing substances like bitumen, oil, grease, remains of paint or laitance shall be removed by suitable technologies. The cleaned surface shall be roughened. Water leaks shall be stopped e.g. with VANDEX PLUG. Bond strength of treated surface shall be 1.5 MPa in average. Exposed reinforcing steel should be cleaned and the residue removed by sandblasting or by using other suitable tools (be sure to achieve SA 2½ clean rating in accordance with DIN EN 12944-4 resp. ISO 8501-1). Also remove concrete surrounding the corroded steel to a sound substrate. – For corrosion protection coating VANDEX BB 75 can be applied.

MIXING

Mix 25 kg of VANDEX POLYCEM Z 1K with 5–5.25 litres of tap water in a clean container to a lump-free, homo-geneous consistency. Use a mechanical mixer (e.g. double action or forced action mixer). Mixing time of 3 minutes after complete addition of powder to the water shall not be undershot. The maximum amount of mixing water shall not be exceeded.

APPLICATION

Processing conditions and preparation

The application shall not take place below +5 °C or on frozen surfaces. Do not apply in direct sunlight.

Thoroughly moisten the substrate. It shall be damp but not wet at the time of application. Any surface water on horizontal surfaces shall be removed.

Manual application

For maximum adhesion, a scratch coat is applied imme-diately prior to application of the first coat to seal voids and allow the air to get out of the substrate. Following this, VANDEX POLYCEM Z 1K can be applied on the green scratch coat in a working step of 2–3 mm. For local higher roughness, layer thicknesses up to 4 mm can be applied manually.

Spray application

VANDEX POLYCEM Z 1K can be applied by wet spraying with commercially available spiral spraying equipment. In order to achieve an optimal spray texture, the quantity of material, air and air pressure shall be variable.

Diameter of spraying nozzle: approx. 4–6 mm.

For maximum adhesion, especially on low porous and low absorptive surfaces, apply first a scratch coat. Following this, apply on the green scratch coat VANDEX POLYCEM Z 1K in a single working step and a layer thickness of max. 2-3 mm.

After about 2–3 hours, the surface can be rubbed off and smoothed by using a sponge board and a trowel. In a multilayer application, the surface of the first layer shall be sufficiently structured.

For multi-layer applications, the following layers shall be applied on the previous layer whilst still green. The already applied layer shall not be damaged when the following layer is applied. The waiting time between the application of two layers depends on the ambient conditions such as temperature, humidity, etc.

CONSUMPTION

Exposition class	Consumption	Layer Thickness
XWW1-3, slightly up to highly aggressive chemical environment	4-6 kg/m²	2-3mm
XWW4, biogenic sulfuric acid attack	10 kg/m²	5mm

CURING

Surfaces exposed to weathering

While curing, protect for at least 5 days from extreme weather conditions (e.g. sun, wind, frost, thaw formation). Fresh applied coatings shall be protected from rain and water for at least 24 hours.

Surfaces not exposed to weathering

In closed rooms and tanks, a relative humidity of approx. 85% shall be aimed for 5 days after application.

PACKAGING

25 kg PE-lined paper bag.

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

STORAGE

When stored in a dry place in unopened, undamaged original

packaging, shelf life is 12 months.

NOTE

The data on this technical data sheet are valid for the product produced by Vandex Isoliermittel GmbH. – Please note that due to other laws and norms, differing data may be valid in each country.

HEALTH & SAFETY PRECAUTIONS

The Safety Data Sheet (SDS) must be read and understood prior to use.

TECHNICAL SERVICE

Tremco CPG Australia Pty Ltd has a team of Representatives who provide assistance in the selection and specification of products. For more detailed information or service and advice, call Customer Service on (02) 9638 2755 or fax (02) 9638 2955.

GUARANTEE/WARRANTY

Tremco CPG Australia Pty Ltd products are manufactured to rigid standards of quality. Any product which has been applied (a) in accordance with Tremco CPG Australia written instructions and (b) in any application recommended by Tremco CPG Australia, but which is proved to be defective, will be replaced free of charge.

Any information provided by Tremco CPG Australia in this document in relation to Tremco CPG Australia's goods or their use is given in good faith and is believed by Tremco CPG Australia to be appropriate and reliable. However, the information is provided as a guide only, as the actual use and application will vary with application conditions which are beyond our control. Tremco CPG Australia makes no representation, guarantee or warranty relating to the accuracy or reliability of the information and assumes no obligation or liability in connection with the information. To the extent permitted by law, all warranties, expressed or implied are excluded.

TECHNICAL DATA			
Exposure classes according to EN 206-1:2013		Carbonation Chlorides without sea water Chlorides from sea water Freeze/thaw attack with/without de-icing agents Chem. attack Chem. attack from waste water Chem. attack from biogenic sulfuric acid (H2S)	XC1, XC2, XC3, XC4 XD1, XD2, XD3 XS1, XS2, XS3 XF1, XF2, XF3, XF4 XA1, XA2, XA3 XWW1, XWW2, XWW3 XWW4
Appearance		grey powder	
Grain size d_{max}	[mm]	0.3	
Density of fresh mortar	[kg/l]	approx. 2.0	
Application time, 20°C	[min.]	approx. 30	
Curing time, 20°C	[h]	approx. 2-4	
Compressive strength	[MPa]	after 1 day: ≥ 10 after 7 days: ≥ 20 after 28 days: > 40	
Flexural strength	[MPa]	after 28 days: ≥ 8	
Bond strength	[MPa]	after 28 days: ≥ 2,0	
Water impermeability (penetration of liquid water), 1,5 bar	[mm]	< 1	
Modulus of elasticity	[GPa]	after 28 days: 20,3	
Further data		refer to CE marking	

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.

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 certain cases might be greater.

Vandex®

Part of TREMCO Construction Products Group

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