Vandex Isoliermittel-GmbH
P-SAC 02/5.1/17-290

OS 5

Elasticized FPD surface protection coating*

- *crack bridging ≤ 2.0 mm at 4.0 mm thickness*
- *according to German Guideline Protection and Rehabilitation of Concrete Constructions OS 5b*
- *UV resistivity according to DIN EN 1062-11*

Permeability to CO_2	s_D >50 m
Water vapour permeability	class I s_D >5 m
Capillary water absorption	w < 0.1 kg/m² · $h^{0.5}$
Crack bridging ability	class B2 (-20 °C)
Adhesion strength	≥ 0.8 MPa
Reaction to fire	class E
Dangerous substances	complies with 5.3

CE
0761

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651/006
EN 1504-2:2004/ZA.1d,1e
Surface protection coating

*FPD-Flexible Polymer Thick Coating

MATERIAL

- 2-component flexible polymer modified waterproofing and surface protection coating
- crack bridging at temperatures down to –20 °C/–4 °F
- thermal compatible to freeze-thaw attack including deicing salt immersion EN 13687-/
- approved as carbonation barrier according to DIN EN 1062-6
- applicable manually and with spray equipment

AREAS OF APPLICATION

- for protection against ingress of water under hydrostatic and non hydrostatic pressure
- for concrete and masonry, render and plaster
- for constructions in civil engineering
- surface protection for horizontal, vertical and overhead applications
- for waterproofing of concrete structures below ground level and rainwater retention basins
- for waterproofing of non trafficable areas, e.g. car parks

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. Maximal depth of roughness shall be 3 mm. Water leaks shall be stopped e.g. with VANDEX PLUG. Bond strength of 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 corroded steel to a sound substrate. – For corrosion protection coating VANDEX BB 75 can be applied.

MIXING

Shake container of the polymer component VANDEX ELASTICIZER PK 75 before use.
Mix 20 kg of VANDEX OS 5 powder with 10 kg of VANDEX ELASTICIZER PK 75 in a clean container to a lump-free, homogeneous consistency. Use a mechanical mixer (e.g. double action or forced action mixer). Mixing time of at least 3 minutes after complete addition of powder to VANDEX ELASTICIZER PK 75.

APPLICATION

Processing conditions and preparation
The application shall not take place below +5 °C or on frozen surfaces. Do not apply in direct sunlight. At the time of application, the substrate shall be dry up to very slightly moist.
For maximum adhesion, a scratch coat shall be applied to seal voids and avoid the formation of pinholes.
For waterproofing against hydrostatic water pressure, VANDEX OS 5 shall be applied on the green scratch coat in no less than 2 working steps.
For waterproofing against non hydrostatic water pressure, VANDEX OS 5 can be applied on the green scratch coat in 1 working step.
Maximum applicable layer thickness is 2–3 mm in one working step.

Manual application
VANDEX OS 5 can be manual applied by trowel.

Spray application
VANDEX OS 5 can be applied on the green scratch coat by wet spraying with spiral spraying equipment. In order to achieve an optimal spray texture, the quantity of material, air and air pressure shall be adjustable.
Diameter of spraying nozzle: approx. 4–6 mm.
Following this the final applied layer shall be smoothed by using a trowel.

In multi-layer applications, the surface of the previous layer shall be sufficiently structured by using a soft brush. The following layers shall be applied on the previous layer whilst still green. The previous applied layer shall not be damaged when the following layer is applied. The waiting time between the applications of two layers depends on the ambient conditions such as temperature, humidity, etc.

CONSUMPTION

Requirement FPD DIN 18533 Part 1	*Consumption*	*Layer thickness*
W1-E Ground moisture and pressureless surface water	3,4 kg/m²	2,0 mm
W2.1-E Seepage water and water under hydrostatic pressure	6,8 kg/m²	4,0 mm
W3-E Ground moisture and pressureless surface water on earth covered decks	5,1 kg/m²	3,0 mm
W4-E Horizontal barrier against rising damp	3,4 kg/m²	2,0 mm
FPD DIN 18535 Part 1 **W2-B** Basins and tanks against water pressure from the inside	6,8 kg/m²	4,0 mm
Application as OS 5b and EN 1504-2	5,5 kg/m²	3,0 mm

Note:
Substrate and application conditions have to be observed. Depending on surface roughness, consumption may vary.

CURING

Surfaces exposed to weathering
Fresh applied coatings shall be protected against too fast drying for at least 3 days. Protect from extreme weather conditions (e.g. sun, rain, wind, frost, thaw formation).

The VANDEX OS 5 coating must be fully cured. In order to meet the technical properties.
Surfaces not exposed to weathering
In closed rooms and tanks, a relative humidity of approx. 60–80% and sufficient air exchange shall be aimed for 3 days after application.

PACKAGING/STORAGE

VANDEX OS 5
20 kg PE-lined paper bag.
When stored in a dry place in unopened, undamaged original packaging, shelf life is 12 months.

VANDEX ELASTICIZER PK 75:
10 kg PE-container.
Store frost-free. Shelf life in unopened, undamaged original packaging is 12 months.

HEALTH AND SAFETY

Please refer to the actual Safety Data Sheets on www.vandex.com.

NOTE

The data on this technical data sheet are valid for the product manufactured by Vandex Isoliermittel GmbH Germany. – Please note that due to local laws and norms, differing data may be valid in other countries.
For further technical and constructive details please contact our technical staff.

TECHNICAL DATA		
Colour		Grey VANDEX OS 5 is not a decorative coating.
Density of wet mix	[kg/l]	approx. 1.7
Workability at 20 °C	[min.]	approx. 30
Rain resistance at 20 °C	[h]	4 (curing condition 23 °C / 50 % relative humidity)
Elongation at 20 °C	[%]	approx. 60
Bond strength at 20 °C EN 1542	[MPa]	≥ 0,8 (Dry storage)
Bond strength after frost/de-icing		No cracking, bubble formation or delamination
Bond strength after frost/deicing and deicing salt immersion	[MPa]	≥ 0,6
Crack bridging capacity at 4 °C	[mm]	2,0
Dynamic crack bridging after 2000 h UV-weathering	[mm]	0,10-0,15 (-20 °C, 1000 cycles) Method B DIN EN 1062-7
Crack bridging capacity at –20 °C	[mm]	2,0
Water impermeable at crack formation: 1,0 mm water pressure: 2,5 bar layer thickness: 4 mm		Water impermeable
Artificial weathering UV –Light irradiation and humidity		After 2000 h of artificial weathering: No cracking, bubble formation or delamination
Further data		please refer to CE marking

All data is averages of 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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