

Neopress[®] Crystal

Crystalline penetrating waterproofing mortar for concrete surfaces



Description

Crystalline penetrating, brushable waterproofing mortar for concrete surfaces. Combines the formation of a waterproofing coating on the surface with crystallization and penetration in depth, in the presence of moisture.

Fields of application

Basements, foundations, shafts, tanks, silos, tunnels, planter boxes, swimming pools, surfaces under tiles, e.g.

Properties - Advantages

- Penetrates and reacts with moisture, producing insoluble crystals which fill and seal capillaries, pores and cracks
- Exhibits high resistance to positive and negative hydrostatic pressure
- Remains reactive, in case of moisture presence at a later time
- Seals capillary cracks of width up to 0,4mm, in the presence of moisture
- Presents excellent adhesion on concrete surfaces and various others construction substrates
- Protects concrete against carbonation and prevents corrosion of steel reinforcement
- Water vapour permeable
- Eco-friendly & user-friendly



Packing

25kg

Colour

Grey

Certificates – Test reports

CE certification acc. to EN 1504-2

Certificate of Conformity No. 1922-CPR-0386

Technical characteristics	
Water requirement per 25kg bag	7-7,5L
Compressive strength (EN 12190)	>35MPa
Adhesion strength (EN 1542)	>1,5N/mm ²
Liquid water permeability (EN 1062-3)	<0,1kg/m ² h ^{0,5}
CO ₂ diffusion - Equivalent air layer thickness Sd (EN 1062-6)	>50m
Water-vapor diffusion - Equivalent air layer thickness Sd (EN ISO 7783)	<5m (Class I – permeable)
Crack-bridging properties (EN 1062-7)	>0,5mm [Class A3(23°C)]
Consumption: • 1,6-1,7kg/m² on vertical surfaces, for two layers • 2,2-2,4kg/m² on horizontal surfaces, for two layers	

Application conditions – Curing details		
Application temperature (ambient - substrate)	+5°C min. / +35°C max.	
Pot life (RH 50%)	+23°C	30 minutes
	+30°C	15 minutes
Drying time (+23°C, RH 50%)	4-6 hours (per layer)	
<i>*Low temperatures and high humidity during application and/or curing prolong the above times, while high temperatures reduce them</i>		

Instructions for use

Substrate preparation

The cementitious substrate must be properly prepared mechanically (e.g. grinding, water jetting, shot blasting, milling etc.) to smooth out irregularities, open the pores and create conditions for optimum adhesion. Older coatings and loose friable material must be completely removed by brushing or by the use of a suitable sander and a high suction vacuum cleaner etc.

Repairs to the substrate, filling of joints, blowholes/voids and surface leveling, repairs in areas with tie holes (after being cut and opened at a depth of 3cm) must be carried out using appropriate repairing products, such as the non-shrinking fiber-reinforced cementitious repairing mortar **Neorep**[®]. Existing construction joints and cracks of width greater than 0,4mm shall be opened longitudinally in V shape at a depth of app. 3cm and then filled as above.

If any oxidized reinforcement is visible, it is recommended, after removing the loose rust, to use the rust converter **Neodur**[®] **Metalforce** and then apply the anti-corrosive mortar **Ferrorep**[®]. These spots shall be also covered later with **Neorep**[®].

In spots where there is existing flow of water, **Neostop**[®] is recommended to be used prior to the application of **Neorep**[®].



Prior to the application of **Neopress® Crystal**, the substrate must be stable, clean and free of dust, oil, grease, dirt, moss or any poorly adhering material. The surface must be as flat and smooth as possible. The cementitious surface must be moistened thoroughly by water, without any remaining ponding water (“saturated surface-dry (SSD) condition”).

Application

To the indicated amount of 7-7,5kg of clean water, 25kg of **Neopress® Crystal** are gradually added, stirring the mixture at the same time with a low-speed electric stirrer, in order to become homogeneous. Then, the mixture is applied initially in all the corners reinforced with the alkali-resistant fiberglass mesh **Gavazzi® 0059-A** (“wet-on-wet” application of two layers with the fiberglass mesh positioned in between) and, at the same time, in one layer over the whole horizontal and/or vertical surfaces by brush or smooth trowel.

As soon as the first layer of cementitious waterproofing has hardened and after slightly saturating it with water, the second layer of **Neopress® Crystal** is applied in a vertical or different direction than the previous one.

If required, every subsequent layer is applied in the same way. The thickness of each layer should not exceed 1mm of thickness, in order to ensure proper curing of the material. For enhanced tear resistance, it is recommended that the system is thoroughly reinforced with the alkali-resistant fiberglass mesh **N-Thermon® Mesh 90gr**.

After the application of the final layer, it is essential to frequently moisten the surface with water (for at least 2-3 days with 2-3 sprays per day) and to protect it from the outside weather conditions (direct sunlight, wind, rain, frost) for a time period of 3-5 days.

Alternative application – Dry-shake broadcast


On new concrete floors, **Neopress® Crystal** may alternatively be applied by evenly distributing the material in powder form (consumption ~2,3-3kg/m²) on freshly-poured horizontal concrete slabs once they have initially set, before final trowelling and finishing.

Special notes

- For additional resistance and in case of applications where flexibility is required, it is recommended to additionally include 3-5kg of **Revinex®** per 25kg of **Neopress® Crystal**, reducing the mixing water at the same time (indicative system ratio 4kg **Revinex®**: 4-5kg water: 25kg **Neopress® Crystal**). The addition of **Revinex®** deactivates the crystals and it is recommended especially for the final layer (or final layers) of the waterproofing system, especially if it is to be overcoated
- **Neopress® Crystal** should not be applied under wet conditions, or if wet conditions or rainy weather are expected to prevail during the application or the curing period of the product
- Water tanks should be filled with water after at least 7-10 days (depending on prevailing atmospheric conditions) have passed from the application of the final layer. The water used for the initial filling of the tank should be disposed
- The durability of the waterproofing system (and especially its resistance to water pressures) is enhanced by the increase of the total dry film thickness, which may be achieved through the application of an additional layer or layers



Appearance	Cementitious mortar
Colour	Grey
Packing	25kg
Cleaning of tools – Stains removal	By water immediately after the application. In case of hardened stains, by mechanical means only.
Storage stability	24 months, if kept in the original sealed packaging, protected from frost, humidity and exposure to solar radiation.

 1922	
NEOTEX S.A. V.Moira str., P.O. Box 2315 GR 19600 Industrial Area Mandra, Athens, Greece (Production factory 1) 17	
1922-CPR-0386 DoP No.: 4950-29 EN 1504-2 Neopress® Crystal Surface protection products Coating	
Water vapour permeability	Class I
Adhesion strength	$\geq 1,5\text{N/mm}^2$
Capillary absorption and permeability to water	$W < 0,1\text{Kg/m}^2\text{h}^{0.5}$
Permeability to CO ₂	$S_D > 50\text{m}$
Reaction to fire	Euroclass F
Dangerous substances	Complies with 5.3

The information supplied in this datasheet, concerning the uses and the applications of the product, is based on the experience and knowledge of NEOTEX® SA. It is offered as a service to designers and contractors to help them find potential solutions. However, as a supplier, NEOTEX® SA does not control the actual use of the product and therefore cannot be held responsible for the results of its use. As a result of continual technical evolution, it is up to our clients to check with our technical department that this present data sheet has not been modified by a more recent edition.

HEADQUARTERS - PLANT
 V. Moira str., Xiropigado
LOGISTICS SALES & CENTER
 Loutsas str., Voro

P.O. Box 2315, GR 19600
 Industrial Area Mandra
 Athens, Greece
 T. +30 210 5557579

NORTHERN GREECE BRANCH
 Ionias str., GR 57009
 Kalochori, Thessaloniki, Greece
 T. +30 2310 467275