Neorep®

High strength, fiber-reinforced, thixotropic, non-shrinking cementitious repairing mortar

CE

Description

High strength, thixotropic, non-shrinking, fiber-reinforced cementitious repairing mortar. Meets the requirements of Class R4 of EN 1504-3

Fields of application

Repairs of damaged, cracked or broken concrete elements (e.g. columns, beams, slabs), cracks and joints on concrete surfaces and industrial floors, visible reinforcements and concrete pipes

Properties - Advantages

- Fiber-reinforced, non-shrinking and highly thixotropic
- Very high mechanical strength
- Excellent adhesion on concrete elements
- Presents high resistance to humidity due to its limited liquid water permeability
- Resistant against cracking arising from non-ideal curing conditions (plastic shrinkage) or vibrations
- Easy and quick laying
- Excellent resistance to chemical attacks from chlorides (sea water, defrosting salt, etc.), sulphates, acid rain, carbon dioxide

Packing

25kg

Colour

Grey

Certificates – Test reports

CE certified acc. to EN 1504-3
Classified as a concrete repairing CC mortar for structural repair of Class R4

Technical characteristics	
Water requirement per bag of 25kg	4,5-4,75L
Maximum grain size (D_{max})	2,5mm
Chloride ion content (EN 1015-17)	≤0,05%

Compressive strength (28 days, EN 12190)	≥45MPa
Adhesion strength (EN 1542)	≥2,0MPa
Resistance to freeze-thaw cycling with de-icing salts (EN 13687-1)	≥2,0MPa
Modulus of elasticity (EN 13412)	≥20GPa
Resistance to carbonation (EN 13295)	Pass
Capillary absorption (EN 13057)	<0,5kg/m^{2}h^{0,5}
Reaction to fire (EN 13501-1)	Class A1
Maximum application thickness per layer	4cm
Consumption: 1,75-1,85kg/m^2 per mm of thickness	

Application conditions - Curing details	
Application temperature (ambient - substrate)	+5°C min. / +35°C max.
Pot life (+20°C)	~1 hour

Instructions for use

Substrate preparation

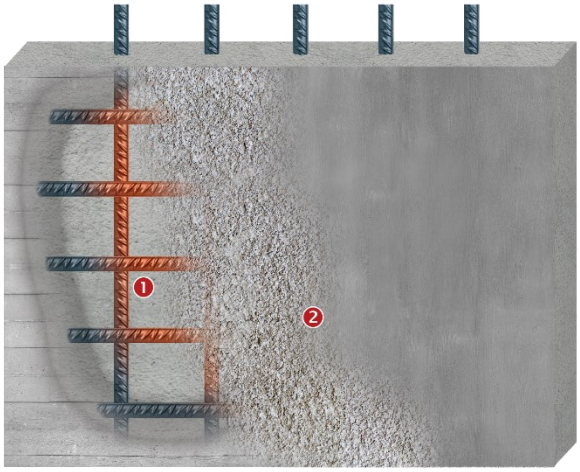
The surfaces must be stable, clean, protected from rising moisture and free of dust, oil, grease and loose materials. Loose or friable concrete must be completely removed, up to the point where a healthy and rough concrete substrate is exposed, on which the application will take place. The cementitious surface must be saturated thoroughly with water to achieve a saturated surface-dry (SSD) condition, without any ponding water. In any visible oxidized reinforcement, it is recommended to use the anti-corrosive mortar **Ferrorep®**, after removing the loose particles.

Application

To the indicated amount of clean water, the respective amount of **Neorep®** is gradually added, while stirring with a low-speed stirrer, in order to obtain a homogeneous mixture, with the desired workability. Then, the mortar is applied on the surface by trowel or spatula. Each layer should not exceed a thickness of 4cm. As soon as the mortar begins to set, finishing may be done by a plastering trowel.

In case of applying multiple layers, the previous layer should be roughened and its surface should be moistened again.

Indicative system build-up



REPAIRING OF CONCRETE ELEMENTS

1. Protection of steel reinforcement against corrosion: **Ferrorep®**
2. Repairing of the concrete element: **Neorep®**

*a) Prior to the application of **Ferrorep®**, it is recommended to locally apply the special water-based rust converter **Neodur® Metalforce** on any existing rusty parts*

*b) Prior to the application of **Neorep®** and for enhancing its adhesion on the concrete element, **Ferrorep®** may also be applied as a bonding agent on the whole surface which is to be covered*

Special notes

- **Neorep®** should not be applied under wet conditions, or if wet conditions or rainy weather are expected to prevail during the curing period of the product
- It is advisable that the stirring of the mixture is done mechanically and not manually with a rod, etc.
- When the mixture starts to harden, it is not recommended to add any extra water for improving its workability
- Workability and drying times are prolonged by low temperatures and high humidity during application and/or curing, while they are reduced by high temperatures
- The fresh mortar should be protected from fast drying by proper means. In applications with direct exposure to the sun, and especially when high temperatures prevail, it is recommended to regularly wet the mortar for 24-48 hours after the application, in order to prevent cracking from fast dehydration and to achieve the proper curing of **Neorep®**
- The addition of **Revinex®** in **Neorep®** (1-2kg **Revinex®**/25kg **Neorep®**) improves the adhesion properties of the mortar on concrete, reinforcements, etc., while it also provides enhanced impermeability and durability
- In case of large-scale applications on vertical or horizontal surfaces at a thickness of more than 4cm, it is recommended to incorporate a suitable fiberglass mesh (e.g. **Gavazzi 0133-A**) after the first layer of **Neorep®**

Appearance	Cementitious mortar
Colour	Grey
Packing	25kg in paper bags
Cleaning of tools – Stains removal	By water immediately after application. In case of hardened stains, by mechanical means
Storage stability	1 year, stored in its original sealed packing, protected from frost, humidity and exposure to sunlight

CE

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DoP No.: 4950-09

EN 1504-3

Neorep®

Concrete repair product for structural repair CC mortar
(based on hydraulic cement)

Compressive strength	Class R4
Chloride ion content	≤0,05%
Adhesion	≥2MPa
Resistance to carbonation	Pass
Capillary absorption	≤0,5kg/m^{2}h^{0,5}
Thermal compatibility	≥2MPa
Modulus of elasticity	≥20GPa
Dangerous substances	Complies with 5.4
Reaction to fire	Euroclass A1

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