

Neorep[®]

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

Fields of Application

Thanks to its special composition and remarkable mechanical properties **Neorep[®]** is suitable for easy and highly durable restoration jobs in buildings without formworks.

Some indicative uses are repairs of damaged, cracked or broken concrete elements (e.g. columns, beams, slabs, stairs, holes of hairpin bends), doors, windows (frames, bases), cracks and joints on concrete, rigid joints used for pre-cast, industrial flooring, visible reinforcements and concrete pipes.

Properties/ Advantages

- **Neorep[®]** is a non-shrinking ready to use premixed mortar of high thixotropy.
- Its aggregates of selected particle size and special additives prevent any cracking attributed to non-ideal curing conditions such as plastic shrinkage or vibrations (e.g. due to noise and traffic of vehicles).
- It shows quick and easy laying and finish.
- **Neorep[®]** possesses modulus of elasticity and coefficient of thermal, which grants excellent compatibility with concrete elements.
- It has great resistance to the attack of chemical agents such as chlorides (defrosting salt, sea water, etc.), sulphate, acid rain, carbon dioxide.
- **Neorep[®]** meets the requirements of Class R4 of EN 1504-3.

Technical characteristics

(The measurements were taken in laboratory environment under a temperature of +23⁰C, relative humidity 50 % and without ventilation)

Appearance	Dry powder
Color	Grey
Maximum thickness of application	4cm
Strength temperature	-30 ⁰ C to +90 ⁰ C
Maximum grain size	2,5mm
Working time at +20 ⁰ C (EN 1015-9)	1-2 hours

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Bulk density of dry mortar (EN 1097-3)	1,15±0,10kg/L
Flexural strength (EN 12190)	≥ 6MPa (28 days)
Compressive strength (EN 12190)	≥ 18MPa (24 hours), ≥ 40MPa (7 days), ≥ 55MPa (28 days)
Shrinkage	No
Consumption	17,5kg/m ² /cm layer thickness
Temperature of application	+5 ⁰ C to +35 ⁰ C
Water per 25kg Neorep[®]	4,6 - 4,75 lt

Requirements as per EN 1504-3 Class R4 (with addition water 20% per weight of powder)

	Results	Requirements (R4)
Compressive strength (EN 12190)	≥ 55MPa (28 days)	≥ 45MPa
Content in chlorides (EN 1015-17)	0,01%	≤ 0,05%
Adhesion to substrate (EN 1542)	2,8MPa	≥ 2,0MPa
Resistance to carbonation (EN 13295)	Yes	Yes
Modulus of elasticity (EN 13412)	20,5GPa	≥ 20GPa
Thermal compatibility - Part 1 freeze-thaw (EN 13687-1)	2,4MPa	≥ 2,0MPa
Capillary water absorption (EN 13057)	0,3 Kg·m ⁻² ·h ^{-0,5}	≤ 0,5Kg·m ⁻² ·h ^{-0,5}
Reaction to fire (EN 13501-1)	Category A1	Category A1

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 in order 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.

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Instructions for use

- Careful cleaning of the surface and removal of dust, oil, grease, traces of rust to achieve a solid substrate.
- In case anticorrosion protection of steel reinforcement is needed, apply two layers of mix 1kg copolymer emulsion **Revinex[®]**/2-3kg **Neorep[®]** with paint brush or brush
- Good wetting of the spots to be repaired at least 6-12hours before mix application
- Add water so as the mix obtains the desired consistency. The mortar is applied with trowel or spray in continuous layers of thickness up to 4cm each. Finishing may be performed by smoothing the surface with a wooden or plastic plastering trowel. This last operation may be performed when the mortar begins to set, i.e. when the fingers no longer sink in the mortar (touch dry).
- The addition of **Revinex[®]** at a rate 1 parts **Revinex[®]**: 3 parts water into **Neorep[®]** (1-2kg **Revinex[®]** /25kg **Neorep[®]**) improves adhesion properties of the mortar to concrete, brick and reinforcement whereas it grants enhanced waterproofing and duration to time and compression.

Notes

- Low temperatures and high humidity during application prolong drying time, while high temperatures decrease it.
- When used in places, which are completely exposed to the sun or too ventilated, wetting during drying of the mortar for 24-48 hours is recommended, especially when high temperatures prevail.
- In case of vertical or horizontal applications of big openings more than 4cm the use of fiber mesh **Gavazzi 0133-A** is recommended after first layer of **Neorep[®]**.

Packing

25kg carton bags

Storage stability

At least 12 months when kept sealed in its original container in dry and covered place.

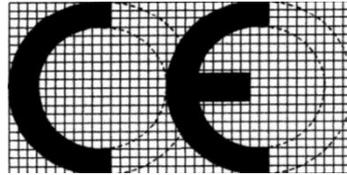
Auxiliary materials

- **Revinex[®]**: Tin cans 1kg,5kg,18kg
- **Fiber mesh Gavazzi 0133-A**: in rolls 50 x 1m or 0,33m

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DoP No. Neorep /4950-09
EN 1504-3
Neorep
Concrete repair product for structural repair
PCC mortar (based on hydraulic cement, polymer
modified)

Compressive strength	R4
Chloride ion content	≤ 0,05%
Adhesive Bond	≥ 2,0 MPa
Carbonation resistance	Passes
Elastic modulus	≥20 GPa
Thermal compatibility , part 1	≥ 2,0 MPa
Capillary absorption	≤ 0,5kg·m ⁻² ·h ^{-0,5}
Dangerous substances	comply with 5.4
Reaction to fire	Euroclass A1