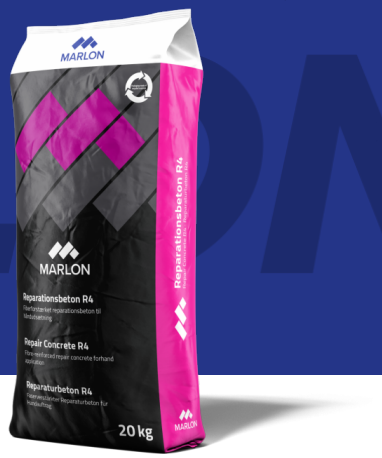
Concrete Repair R4

Repair mortar to horizontal and vertical surfaces



Product description
Marlon Concrete Repair R4 is a fibre-reinforced, cement-based premixed dry mortar product, consisting of Portland cement, Pozzolana, polymers, plasticisation and adhesive-enhancing additives, plus oven-dried quartz sand with a controlled grain curve. Marlon Concrete Repair R4 is mixed to a dense mortar with low shrinkage, the composition of which gives optimum adhesion and ease of use. It is ideal for concrete repairs to horizontal and vertical surfaces, including overhangs, in aggressive environments. Marlon Concrete Repair R4 fulfils the material requirements for environment class E, DS/EN 206 DK NA:2020, contains no corrosive elements and is water and wind resistant.

Benefits
- Mortar to horizontal and vertical repair
- Fibre-reinforced
- R4 concrete
- Well suited for repairs from 2 mm up to 50 mm
- Just add water

Application
Marlon Concrete Repair R4 is used for the repair of horizontal, vertical and overhanging surfaces exposed to aggressive environments - e.g. on bridges, beams, decking and columns - and for the repair and renovation of balconies, facades etc. Places where the surface is concrete.

Pre-treatment
Clean the surface to be repaired of loose materials, dust, cement crust, oil, rendering or other contaminants which can prevent adhesion. The mortar can be applied to firm, dry and damp surfaces. Smooth surfaces must be keyed to ensure sufficient contact for the mortar. We recommend applying a suitable cement wash to ensure maximum adhesion.

Application
Add approx. 0.14 litres clean cold water per 1 kg dry product (2.9 litres per 20 kg). Mix thoroughly in a suitable mixer for min. 5 mins. An electric drill with a blender bit can be used for small quantities. Mix to a good smooth consistence, allow to stand for 5 to 7 mins. before mixing again. Recommended layer thickness: between 2 and 50 mm. Apply the mixed mortar to the damaged area using a trowel. Spread thinly over the edge of the damaged area for a smooth finish. Apply a patterned finish using felt, rendering or a steel grille. Lower temperatures will extend and higher temperatures shorten opening and curing time. Under normal conditions at +20°C, the mix is pliable for approx. 30 mins. We recommend applying a small amount of the mix as a test in the event of doubt.

Aftercare
Do not expose newly-laid concrete to pressure, and protect against rapid drying-out caused bydraughts, high room temperature, sunlight etc. as soon as possible after application.

Limitations
Do not apply Concrete Repair R4 at temperatures below +5°C, or over +30°C. Cannot tolerate frost during the curing and binding period.

Cleaning
Clean equipment, machinery and tools with water immediately after use. Hardened Concrete Repair R4 can only be removed mechanically

Inspection
Marlon Concrete Repair R4 is subject to internal inspection according to Marlon's quality assurance system. Subsequent measuring and mixing at the site of application is not included in quality control.

A solid solution

Product information

Manufacturer
Marlon Tørmørtel A/S
Virkelyst 20
DK-8740 Brædstrup

Material type
Product type PCC. Cement-based dry concrete/mortar for wet application.

Environmental class
Extra aggressive.

Cement type
Portland cement, CEM I 52,5 N (LA).

Filler material
Oven-dried and sorted silica sand, cl. E.

Additives
Plasticiser and additives. Optionally, polypropylene fibre.

Added water
Approx. 2.9 l per 20 kg sack.

Layer thickness
2-50 mm. Guideline.

Yield
1,000 kg dry mortar corresponds to approx. 500 l wet mortar.

Packaging
type 20 kg plastic sacks and big bags.

Storage
12 months in dry and suited conditions in unopened packaging.

Technical data	Values	Method
Compressive strength, 28 days	> 45 MPa	DS/EN 12190
Bending tensile strength, 28 days	> 8 MPa	DS/EN 12190
Adhesive strength, 28 days	> 2 MPa	DS/EN 1542
Air content	9 %	DS/EN 1015-7
Chromate content	< 2 mg/kg cement	DS/EN 1015-17
Shrinkage, 28 days	< 1 ‰	DIN 52450
Resistivity	8.4 k0hm cm	APM 219
Density (wet)	Approx. 2000 kg/m^3	DS/EN 1015-7
Free expansion, 28 days	0.06 ‰	DS/EN 12617-4
Consistency (set dimensions)	130 mm	DS/EN 12350-2

Information

Item no.	1000380
DB no.	1884697
Pr no.	1586112
Version	07.16 replaces 05.16

CE

Marlon Tørmørtel A/S
Virkelyst 20
8740 Brædstrup
Year 09
DoP 1000375

DS/EN 1504-3
1073
Concrete repair product for constructive repair of PCC mortar, based on hydraulic cement.

Compressive strength	> 45 MPa class R4
Chloridion content	≤ 0.05 %
Adhesion	≥ 2.0 MPa
Carbonisation	Passed
Elasticity modulus	≥ 20 GPa
Thermal compatability	Part 1 ≥ 2.0 MPa
Capillary absorption	≤ 0.5 kg x m^{-2} x h^{-5}
Hazardous substances	Complies with 5.4
Fire resistance	Class A1

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