

Fibrocem R4

Fiber-reinforced self-passivating thixotropic cement-based mortar for the restoration and smoothing of concrete One-component with compensated shrinkage. Semi-rapid setting.



Fields of application:

- for restoring degraded concrete;
- for rebuilding the iron covering layer in reinforced concrete decayed due to iron oxidation without passivating reinforcing irons;
- for filling defective surfaces in concrete, such as screeds, industrial floors, ramps, etc;

- for restoring and rebuilding pillars, beams, treads, risers, edges, projecting and decorative elements;
- professional use only.

Characteristics:

Fibrocem R4 is an anti-shrinkage thixotropic mortar with semi-rapid setting for the structural restoration of concrete to carry out passivation of the reinforcing irons and smoothing in a single solution. It has an excellent workability, with thickness from 2 to 40 mm, and a very good finishing degree; thus, it is suitable for regularizing, smoothing, re-building surfaces in concrete and reinforced concrete, mortars in general, cement-based renders and screeds. As it has an excellent mechanical resistance, it is also used for horizontal elements in concrete, string courses, treads in balconies and terraces.

Application:

It is applied by professionally preparing the surfaces to be treated, removing dust, brittle parts, grease and any paint. Carefully clean the reinforcing irons until they are free of rust using a manual or electric metal fiber brush, or by sanding. The substrate to be treated must be rough, so as to ensure the bonding, and sufficiently wet. **Fibrocem R4** must be mixed with 5,5 L clean water per 25 kg bag until getting the wished density, considering that the quantity of added water influences the drying time of the product. Do not add other aggregates or binders to the mixture; in case of several overlapped coats, apply before the coat below has dried. For mechanized application, we recommend the use of a worm screw plastering machine (type Turbosol or Putzmeister) or three-phase continuous cycle mixing pump (type PFT G4) equipped with mixer, stator/rotor D 6-3 (flow rate 22 l/min), material tube diameter 25 mm, length 10-15 m and spray lance.

Quality and Environmental Standards:

Fibrocem R4 undergoes constant, careful testing at our laboratories, in compliance with the legislation in force – UNI EN ISO 9001/2015.

CE	Opera Srl Via degli Scavi 19/21 47122 Forlì - Italy	Characteristics	Application methods	Consumption
DOP-IT-01-011 FIBROCEM R4 EN 1504-2:2004	Coating for the surface protection of concrete by controlling humidity and increasing resistivity.	One-component / Self-passivating Semi-rapid Mixture pot life: about 40 minutes Final hardening: 60 minutes Mixture water: about 5.5 l every bag Min. coat thickness 2 mm Max. coat thickness: 4 cm Max total thickness: 5-6 cm Paintable: after about 4 hours Resistance to compression after 28 days: 52 N/mm ²	Trowel Smooth trowel Spraying machine	17 kg/m ² /cm of thickness
DOP-IT-01-012 FIBROCEM R4 EN 1504-3:2005	Hydraulic mortar modified by the addition of polymeric additives R4-PCC .			Storage Shelf life of 12 months in the original packages and in a fresh, dry place
DOP-IT-01-013 FIBROCEM R4 EN 1504-7:2006	Cement-based mortar for protecting the reinforcements of concrete against corrosion in civil works and buildings..			

Code	Product	Form and color	Packages	Pallet
404035	Fibrocem R4	Grey powder	5 kg x 4 pz	480 kg
404030	Fibrocem R4	Grey powder	25 kg	1500 kg

Warning

- do not apply in temperatures below +5°C. or above +35°C.;
- do not apply to concrete surface that are particularly smooth; roughen up the surface prior to use;
- after application, ensure the area reconditioned sets properly by making sure the water does not evaporate too fast;
- do not apply to frozen bases or those at risk of freezing during the 24 hours following application;
- do not pour on.

Technical and application specifications

Hazard classification as per Directive 99/45/EC:	irritant
Specific weight of mixture:	1.98 g/cm³
Pot life:	approx. 50 minutes
Application temperature:	from +5°C to+35°C
Mixing water ratio:	22% (about 5,5 lt each 25kg bag)
Mixture pH:	over 12
Start / end of paste:	50-70 (+21°C)
Minimum coat thickness:	2 mm
Maximum coat thickness:	40 mm
Granulometric range:	0-0.5 mm
Room/ambient temperature:	from -30 °C to +90°C
Harmonised customs code:	38245090



Performance EN 1504-3 R4 class	process	minimum requirements	value
Compression resistant after 28 gg	EN 12190	≥ 45 Mpa	>50 Mpa
Bending resistance after 28 gg	EN 196/1	none	10 Mpa
Adhesion (28gg)	EN 1542	≥ 2 Mpa	> 2 Mpa
Resistance to carbonation	EN 13295	depth of carbonation ≤ reference concretes	passed
Elastic module to 28 gg	EN 13412	≥ 20 GPa	22 Gpa
Frost-thaw cycle thermal compatibility	EN 13687-1	≥ 2 Mpa	≥ 2 Mpa
Capillary absorption	EN 13057	≤0,5 kg * m ⁻² h ^{0,5}	≤0,5 kg * m ⁻² h ^{0,5}
Chloride ion content	EN 1015-17	≤ 0,05 %	≤ 0,05 %
Reaction to fire	EN 13501-1	euroclass	A1
Performance EN 1504-2	process	minimum requirements	value
Water vapor permeability	EN ISO 7783-2	reference class	Class I: sd<5m
Capillary absorption e water permeability	EN1062-3	W<0,1 kg * m ⁻² h ^{0,5}	W<0,1 kg * m ⁻² h ^{0,5}
Adherence force for direct traction	EN 1542	≥ 0,8 Mpa	≥ 2 Mpa
Linear withdrawal	EN 12617-1	≤ 0,3 %	≤ 0,3 %
Adherence following thermal shock	EN 13687-2	≥ 2 N/mm ²	≥ 2 N/mm ²
Performance EN 1504-7	process	minimum requirements	value
Corrosion protection	EN 15183	no corrosion	no corrosion
Adhesion by cut	EN 15184	> 80 % of the value of the bare bar	passed

Measurement of data at 23°C/50% Residual Humidity and no ventilation. The data may be considerably modified by the conditions of use.