Betonfix MONOLITE N

ST5-0217

Thixotropic high-resistance, normal curing mortar, for structural and non-structural repair of reinforced concrete structures.

EN 1504-2 | EN 1504-7 | R4 EN 1504-3 | CE

DESCRIPTION

Betonfix MONOLITE N is a non-shrink, normal curing, ready-to-use, thixotropic mortar with the addition of synthetic fibers.
It has high mechanical strength for both short and long curing, strong adhesion to concrete, high resistance against sulphates and excellent durability even in strong aggressive conditions (coastal areas, deicing salts, acid rain).
It is CE marked as an R4 mortar according to UNI EN 1504-3 and for systems for the protection of reinforcing steel (according to 1504-7). It is CE marked as a protective coating according to 1504-2, intervention principles C, MC and IR.

ADVANTAGES

- **Performances**: final mechanical development required for R4 mortars within the first 7 days.
- **3 in 1 System**: passivation of armor, restoration and skim coating at the same time in just a day of work, with a single coat.
- **Versatile**: suitable for both structural repairs (cortical) and non-structural (skim-coating).
- **Easy to apply**: excellent workability and easy to apply (manual or mechanized).

USES

Consolidation, restoring and smoothing of concrete works (columns, beams, cornices, balcony risers, bridges and road and railway viaducts, canals, dams, tunnels).

APPLICATION

	Manual application		Normal curing time: 250 ± 30 mins
	Mechanical devices application		Mixing water: 5-5,25 lt/ 25Kg

	Max thickness per coat: 2-30 mm for horizontal application 2-20 mm for vertical application 2-15 mm for overhead application

The substrate must be perfectly clean, compact, free from dust, grease, varnishings, etc.
Carefully remove degraded and inconsistent concrete using hammer and chinsel until you get a compact substrate.
The superficial tensile strength of concrete “Pull off” mustn’t be lower than 1,5 Mpa as indicated in the substrate quality check procedures according to EN 1504-10.
Remove the concrete in contact with the visible metal reinforcement using a needle gun and then sandblasting it.
Soak the area to be treated and remove any possible standing water, before the casting.
Betonfix MONOLITE N is a ready-to-use product with the simple addition of drinking water for each package, depending on the quantity shown in the table.
Mix for 2 minutes max. with cement mixer or using a concrete mixing driller in case of small quantities of mixture, taking care to introduce firstly 3/4 of the required water and then, steadily, pour the product and the remaining water until obtaining the desired consistency.
Apply by trowel or by spray with suitable plastering machine.
If the execution of a continuous coating is foreseen using **Betonfix MONOLITE N**, it is necessary to scabble the total area, place a suitable galvanized and welded metal net, attached and anchored to the substrate, and apply the mortar with a thickness such as to create a concrete cover of at least 2 cm.

CONSUMPTION

17 Kg/m²/cm.

PACKAGING

25 kg multilayer polythene bag.
Pallet 60x25 – 1500 Kg.

Steadfast Specialist Products • The Yard, Orchard Cottage, Cary Fitzpaine, Somerst, BA22 8JB
www.steadfastspl.com • info@steadfastspl.com • Tel. +44 (0)333 210 1410

STORAGE

Protect from humidity. Products to be stored in a dry, sheltered place. Under these conditions and in intact containers, the product maintains its technical characteristics for 12 months.

Characteristics	Typical Values
Aspect	Powder
Colour	Grey
Apparent specific weight UNI 9446	1,40 ± 0,1 g/cm³
Mixing water	5-5,25 lt
Hazard classification 1999/45/CE & 67/548/CEE	Irritant
Granulometric interval UNI EN 1015-1	0,1 – 0,5 mm
Apparent volumetric mass of fresh mortar UNI EN 1015-6	2050 ± 30 Kg/m³
Consistency of the mix UNI EN 13395-1	40-50 %
Initial hardening time UNI EN 196-3 at 20°C & 65% H.R.	250 ± 30 mins
Final hardening time UNI EN 196-3 at 20°C & 65% H.R.	400 ± 30 min.
Minimum application temperature	+5 °C
pH of the mixture	12 ± 0,5
Dangerous substance	According to DM 10/05/2004

Characteristics	Limits EN 1504-3 for R4 mortars	Typical Values	
Compressive strength UNI EN 12190 [MPa]	In 28 days, with curing at +21°C ≥ 45	@ +5°C 1 gg ≥ 8 7 gg ≥ 25 14 gg ≥ 35 28 gg ≥45	@ +21°C 1 gg ≥ 15 7 gg ≥ 35 14 gg ≥ 40 28 gg ≥50
Bending strength UNI EN 196-1 [MPa]	No request	@ +5°C 1 gg ≥ 2 7 gg ≥ 4 14 gg ≥ 5 28 gg ≥6	@ +5°C 1 gg ≥ 4 7 gg ≥ 6 14 gg ≥ 7 28 gg ≥8
Secant modulus of elasticity in compression EN 13412 [GPa]	≥ 20	≥ 20	
Chloride content EN 1015-17 [%]	≤ 0,05	≤ 0,05	
Adhesion to CLS (UNI EN 1542) [MPa]	≥ 2	≥ 2	
Adhesion to CLS (UNI EN 1542) after dry cycles EN 13687-4 [MPa]	≥ 2	≥ 2	
Adhesion to CLS (UNI EN 1542) after storm cycles EN 13687-2 [MPa]	≥ 2	≥ 2	
Resistance to accelerated carbonation, UNI EN 13295	Carbonation depth, dk <Concrete for reference Type MC 0.45 a / c	OK	
Impermeability to water (capillary absorption coefficient, UNI EN 13057) [Kg/m²·h¹/²]	≤ 0,5	< 0,5	
Reaction to fire	-	A1	

Characteristics	Limits EN 1504-7	Typical Values
Test of protection against corrosion (UNI EN 15183) after 10 cycles of condensation with water, 10 cycles of sulfur dioxide in accordance with EN ISO 6988, 5 days of saline fog according to EN 60068-2-11	After the series of cycles, coated steel bars must be free of corrosion. The penetration of rust at the end of the steel plate without coating must be <1 mm	OK
Pull-out strength of the bars treated (UNI EN 15184), relative load to a displacement of 0.1 mm	Load of at least 80% on uncoated armor	OK
Determination of the glass transition temperatures (UNI EN 12614)	At least 10ºK above the maximum operating temperature	-

WARNING

Product intended for professional use.
It is possible that different remittances made from the same raw materials present colors slightly discordant; may have tiny chromatic variations between batches of production which in no way impair the technical performance of the products supplied.
Do not remix with water any product that has already started to set.
Do not add cement, additives or other Betonfix mortars.
Before using, check bags have not been damaged, and do not use the product if there are lumps.
Use all the material once the package is opened.
Take all necessary precautions to ensure correct curing of the castings.
Do not cast at temperatures below +5 ° C.
Wet with water for the first 48 hours, or cover with plastic sheets or damp jute bags.
Do not use anti-evaporation products if there is no provision for further coatings.

The technical specifications and application methods recommended here are based on our current knowledge and experience and do not represent any form of guarantee of the final results obtainable with the product.

It is the customer's responsibility to check that this data sheet is still effective and it has not been replaced by a more updated version, and that the product is suitable for the intended use.

Steadfast Specialist Products • The Yard, Orchard Cottage, Cary Fitzpaine, Somerst, BA22 8JB
www.steadfastspl.com • info@steadfastspl.com • Tel. +44 (0)333 210 1410