

FLUIDCRETE R4

FLOWABLE MORTAR FOR STRUCTURAL CONCRETE REPAIRS AND ANCHORING

Highly flowable and shrinkage compensated mortar

Description : Single component, cementitious, high strength , shrinkage compensated, flowable mortar. Ideal for structural concrete repairs, precision grouting and anchoring of reinforcement.

Usages: It is suitable for:

- repairs of structural elements of concrete (beams, columns) using formworks
- concrete jackets with dense reinforcement
- precision grouting of machinery and steel columns
- horizontal anchoring of steel reinforcing bars



Advantages:

- High strength (class R4)
- It contains pure quartz aggregates
- Shrinkage compensated
- Impermeable
- No bleeding or segregation
- High flow (EN 13395-2) for full compaction even in areas with congested steelwork

Packaging /distribution :

- 25 kg bags
- 1500 kg pallets

Storage: 12 months from the date of production in unopened package, in a dry place.


Safety precautions : This product contains cement and reacts as alkaline with moisture, so it is classified as irritant. It must be used with care according to the instructions for use. In order to avoid any injuries due to alkalis of the cement, wear gloves, protective glasses and avoid breathing the dust. Please consult the SDS of the product.


Specifications: **EN 1504-3 (R4) & EN 1504-6**

Certification /CE marking: Factory production control certification:
TÜV AUSTRIA HELLAS (0906) - 0906-CPR-02413045

TECHNICAL DATA:

Compressive strength:	> 45 MPa (Class R4)
Chloride content:	≤0.05%
Adhesive bond:	≥2 MPa
Restrained shrinkage /expansion:	≥2 MPa
Carbonation resistance:	Passes
Elastic modulus:	≥ 20 GPa
Capillary absorption:	≤0.5 kg/m ² h ^{0,5}
Pull off strength:	Shift < 0,6mm for a load of 75 kN
Reaction to fire:	Euroclass A1

 14 DoP:207 MAR-CPR 0906
NORDIA S.A. 364 Kifissias Av., 15233 Chalandri, Athens/ Greece
EN 1504-3 FLUIDCRETE R4 Highly flowable repair mortar (CC mortar) for structural concrete repairs
Compressive strength: <i>class R4</i> Chloride ion content: ≤ 0.05% Adhesive bond: ≥ 2 MPa Restrained shrinkage/expansion : ≥ 2 MPa Carbonation resistance: <i>pass</i> Elastic modulus : ≥ 20 GPa Capillary absorption: ≤ 0.5 kg m ⁻² h ^{0.5} Dangerous substances: <i>comply with §5.4</i> Reaction to fire: <i>class A1</i>

 14 210 MAR-CPR 0906
NORDIA S.A. 364 Kifissias Av., 15233 Chalandri, Athens/ Greece
EN 1504-6 FLUIDCRETE R4 Highly flowable repair mortar (CC mortar) for precision grouting and anchoring of reinforcement
Pull-out strength : ≤ 0,6mm (for a load of 75KN) Chloride ion content: ≤ 0.05% Dangerous substances: <i>comply with §5.3</i> Reaction to fire: <i>class A1</i>

APPLICATION:

Mixing ratio: 3.5 – 4.2 lt of water per bag of 25 kg

Consumption: Approx. 20 kg of powder, per m², per 10 mm layer thickness

Application mode:

Concrete repair:

- The concrete substrate must be completely clean and structurally sound.
- The edges of the surface to be repaired should be cut vertically to a depth of at least 10 mm. The cavity of the surface to be repaired should be at least 10 mm thick.
- Remove deteriorated concrete or mortar by hand or mechanical methods (chisel or high pressure water blasting) ensuring also the appropriate surface roughness.
- Reinforcement should be cleaned from rust and any other loose and deleterious materials or add new bars if the existing are no longer appropriate
- Before applying FLUIDCRETE the substrate should be saturated with water
- Remove excess water, if any.
- In a clean bucket, initially pour the minimum amount of water indicated, start the mixer and add FLUIDCRETE continuously. Mix (in low speed) until a homogeneous, without lumps, mixture is achieved
- Then leave the mixture to settle for 2 – 3 min and if necessary add water (according to the amount indicated), until the required consistency is achieved and mix for a further 2 to 3 minutes
- FLUIDCRETE is casted in situ continuously, placing it inside the formwork from one side only to allow air to escape
- Hand mixing of the product is not recommended.

Precision grouting:

- Before placing the machine, remove defective concrete ensuring also the appropriate roughness of the concrete surface
- Clean all in contact, with the mortar surfaces, from oil, grease, dust or any foreign material.
- Ensure that air-relief holes have been made on the bedplate and place the equipment.
- After machine is set and aligned and before applying FLUIDCRETE, saturate the concrete surface with water and remove excess water if any
- Mix the mortar (as specified above) and cast in situ continuously, placing it inside the formwork from one side only to allow air to escape

General:

- After application all free surfaces of the mortar should be properly cured for

at least 2 days. During the summer period with wet burlaps, spraying water or curing agents and during winter period should be protected from low temperatures with plastic sheets.

- The above application guidelines are indicative, for the correct use of the product. For more technical details please contact the company's technical department.
- For thickness application > 50mm also contact the technical department of NORDIA SA.

We guarantee the quality of all our products, on the basis of their technical specifications, as described in the Declaration of Performance (CE) and this technical data sheet. Such guarantee refers only to the products that we deliver for use and not to its application or final result, which largely depend on the experience and quality of work of each user and on the application conditions. The user is advised to test the product on a small scale, and if he is satisfied with the result, then to use the product on large scale in his project. This edition of technical data sheet automatically cancels any previous version