

RC 220



One component multipurpose repair mortar

- ▷ **Excellent workability**
- ▷ **High mechanical strength**
- ▷ **High adhesion**
- ▷ **Thixotropic, easy application even on ceilings**
- ▷ **High resistance to ageing**
- ▷ **Application thickness 2 - 20 mm**

Description

RC 220 is a ready to use cement-based, fiber reinforced mortar with selected aggregates, modified polymers and special additives. It can be easily applied on horizontal and vertical surfaces for non-structural concrete repairs providing a smooth finish. RC 220 can be used as substrate levelling compound prior to the application of coverings such as ceramic tiles or PLANOCOLOR decorative coatings on floors, walls and ceilings.

Certifications

CE Marking with Declaration of Performance (DoP) C08169-CPR-2020101 (grey) and C08206-CPR-2020601 (white) as non-structural repair product used in buildings and civil engineering works, Class R2.

VOC emission classification GEV-Emicode EC1^{PLUS}, license number 13733/14.02.20

Uses

RC 220 is suitable for:

- Concrete restorations, Principle 3, Method 3.1 & 3.3 of EN 1504-9
- Levelling ceilings, horizontal or/and vertical surfaces in a thickness of 2 – 20 mm in one single layer
- Spot restorations up to 50 mm – filling gaps and minor defects
- Repairing cracks in wall masonry
- Formation of rigid joints
- Substrate levelling prior to the application of PLANOCOLOR decorative coatings

Technical Data

Product Identity

Form	Powder
Color	White or grey
Chemical substance	Portland cement, aggregates, special additives
Granulometry	D _{max} : 0,6 mm
Bulk density	1,5 ± 0,1 kg/L
Storage	12 months on dry area in the original sealed packaging

Application data (+23°C & 50% R.H.)

Mixing ratio	4,25 - 4,75 L of water for 25kg	
Density of fresh mortar	1,9 ± 0,1 kg/L	
Application temperature	from +5°C up to +35°C	
Pot life	≈ 2 hours at +20°C	
Walkability	after 3-4 hours	
Residual humidity depending on thickness ^a :	<4,5%	<4%
- 5 mm	≈ 12 hours	≈ 18 hours
- 10 mm	≈ 36 hours	≈ 2 days
- 20 mm	≈ 2 days	≈ 3 days

Final performance according to EN 1504-3:2005, Class R2

	Performance	Requirement	Method
Compressive strength	≥ 35 N/mm ²	≥ 15 N/mm ²	EN 12190
Flexural strength	≥ 12 N/mm ²	No requirement	EN 12190
Chloride ion content	≤ 0,02 %	≤ 0,05 %	EN 1015-17
Adhesive bond	≥ 1,5 N/mm ²	≥ 0,8 N/mm ²	EN 1542
Thermal Compatibility Part 1: Adhesion after freeze and thaw cycles	≥ 1,2 N/mm ²	≥ 0,8 N/mm ²	EN 13687-1
Capillary absorption	≈ 0,3 kg /m ² √h	≤ 0,5 kg /m ² √h	EN 13057
Dangerous substances (Cr6+)	Comply with 5.4		EN 196-10
Reaction to fire	F	Class	EN 13501

a: Determination by drying method

Application Procedure

Substrate Preparation

Remove deteriorated and loose concrete parts until the substrate is solid, strong and rough with a minimum tensile strength of 1,5 N/mm². Surfaces must be clean, free of dust, dirt, oil, grease, rust and other elements that might compromise adhesion. Pre-wet the substrate with water and remove before application the excess with a sponge or air. Non-absorbent surfaces such as tiles, terrazzo floors, natural stones should be primed first with PLANO CONTACT FAST.

Preparation of the mix

Mix the content of the 25kg paper bag containing RC 220 with 4,25 - 4,75 liters of clean and fresh water with electrical hand drill mixer at low speed at least for 3 min, until a uniform mortar free of lumps is obtained. For small quantities mixing can be performed also by hand.

Application

The mixture is applied by means of a flat trowel, in horizontal and vertical surfaces. The maximum application thickness is 20 mm per layer and for ceilings is 15 mm. When higher thickness is required, apply subsequent coats when the preceding layer starts to harden.

After application of RC 220 it should be left to cure in a relatively moist environment. For smoothing surfaces prior to the application of PLANOCOLOR MICROCEMENT or PLANOCOLOR GRANULATES coatings it is recommended waiting 18hours - 3 days depending on the application thickness. For applications of humidity stable coverings such as ceramic tiles usually 24-48 hours is enough.

Recommendations

- Avoid applications during direct sunlight exposure and/or strong wind and rain
- Apply only upon solid and well-prepared rough substrate
- Do not add water or additives once the mix starts to set
- Do not apply upon existing expansion or movement joints of the substrate
- Do not add cement, gypsum, lime or other materials that might affect the properties of the mortar
- Do not apply upon substrates subjected to rising humidity
- Do not exceed 20 mm in thickness per layer and 15 mm in case of applications on ceilings
- Do not apply when temperature of the substrate and environment is lower than +5°C and higher than +35°C
- Do not apply upon anhydrite-based substrates, metal surfaces or resilient substrates
- Always ensure that that humidity level is lower than what the covering requires
- Application must be done by professional applicator

Consumption

Consumption of RC 220 is 15 kg/m²/cm thickness.

Cleaning

Tools, buckets, tiles etc. can be cleaned with fresh and clean water as long as RC 220 mix is still fresh. After hardening occurs, cleaning can take place by mechanical means.

Storage

RC 220 remains stable for 12 months from production date inside its original sealed packaging, stored in protected dry area in temperature between +5°C and +35°C.

Packaging

Multi-layer paper bags of 25 kg

Safety Instructions

For information and instructions regarding disposal and safe handling, users should refer to the latest Safety Data Sheet of the product containing ecological, toxicological and other safety related data.

Legal notes

The technical data and recommendations contained or listed in this leaflet are the result of laboratory measurements, of our current knowledge and experience. All the above-mentioned information and specifications should in any case be considered as indicative, as they may differ from each other. The Company makes every effort to ensure the accuracy of the information provided herein. Product specifications, prices and availability are subject to change without notice and may differ from those shown.

In practice, variations in materials, substrates and on-site implementation conditions are such that no warranty can be given or implied, as to the merchantability or suitability of the materials for a particular purpose and for the exact conditions of each project. Anyone interested of using the product must be sure beforehand that the product is suitable for the intended use and in any case, the user is solely responsible for any consequences due to the use of the product. Among other things, the Company is not responsible for any normal wear or tear from environmental or other inappropriate conditions. We reserve the right to revise or change the data herein without prior notice.

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For the latest and a valid version of the Technical Data Sheet, the user of the material must refer to our website www.novamix.gr or directly to the QR Code of the product.



DOMOCHEMICAL S.A.
40 Papanikoli str.
Chalandri, 15232, Athens
T +30 210 68 93 953
F +30 210 68 94 571
novamix@novamix.gr