

NOVACEM CREATIVE

Cement based binder for creating low thickness pebble coatings

- ▷ **Only in combination with aggregates**
 - ▷ **Suitable for interior and exterior walls and floors**
 - ▷ **Suitable for permanent immersion in water**
 - ▷ **Low thickness**
 - ▷ **High mechanical strength**
 - ▷ **Excellent workability**
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Description

NOVACEM CREATIVE is a mixture of high strength cement and special additives. When mixed on site with properly graded natural or synthetic aggregates, such as silica sand, marble or recycled glass granulates, it creates a unique textured or polished micro-pebble coatings, on horizontal or vertical surfaces, in very low thickness and high mechanical strength.

Uses

NOVACEM CREATIVE can be used in application such as:

- Textured, non slip surfaces with natural optic
- Polished terrazzo surfaces

For horizontal and vertical applications:

- Exterior areas, landscape design, swimming pools, etc.
- Interior areas, bath rooms and wet areas
- Under floor heating floors
- In areas with heavy traffic, showrooms, commercial centers, public buildings or offices
- Furniture, tables, offices, benches

For placement on various substrates such as:

- Concrete or screeds
- Existing coatings such as tiles, natural stones
- Mortars and masonry mortars
- Cement boards and gypsum boards (with a suitable primer)

Technical Data

Product Identity

Form	Powder
Color	White & Grey
Chemical substance	Portland cement, special additives
Granulometry	Dmax : 60 µm
Bulk density	1,0 ± 0,1 kg/L
Storage	12 months on dry area in the original sealed packaging

Application Data (+23°C % & 50% R.H.)

Mixing ratio	13 – 18% depending on the rate of addition		
Specific gravity of the mix	2,1 ± 0,1 kg/L		EN 1015-6
Dry density of the mix	2,0 ± 0,1 kg/L		EN 12190
Application temperature	from +5°C up to +35°C		
Workability	60 - 90 min / 20°C		
Application thickness	6 – 20 mm		
Walkability	2 – 3 hours		
Compressing strength	1d	≥ 15 N/mm ²	
	7d	≥ 35 N/mm ²	EN 196-1
	28d	≥ 45 N/mm ²	
Flexural strength	1d	≥ 3 N/mm ²	
	7d	≥ 7 N/mm ²	EN 196-1
	28d	≥ 8 N/mm ²	

NOVACEM CREATIVE 25%

Recommended water quantity 13 – 15 %

Final performance with 14% water/mix ratio*

Compressing strength	1d	≥ 10 N/mm ²	
	7d	≥ 25 N/mm ²	EN 1015-11
	28d	≥ 30 N/mm ²	
Flexural strength	1d	≥ 3 N/mm ²	
	7d	≥ 5 N/mm ²	EN 1015-11
	28d	≥ 6 N/mm ²	

Adhesion	$\geq 1,7 \text{ N/mm}^2$	EN 1015-12
Chloride ion content	$\leq 0,03 \%$	EN 1015-17
Capillary water absorption	$\leq 0,05 \text{ kg/m}^2 \sqrt{\text{h}}$	EN 1015-18
Water vapour permeability coefficient	$\mu \leq 20$	EN 1015-19
Thermal compatibility part 1:	$\geq 1,5 \text{ N/mm}^2$	EN 13687-1
Capillary Absorption	$\leq 0,21 \text{ kg/m}^2\sqrt{\text{h}}$	EN 13057
Reaction to fire	F	EN 13501-1

* Received data with PLANOCOLOR GRANIT MQ 50 14 or MR 60 00, 20 - 23°C temperature, 60-65% RH without aeration. Values may vary depending on the aggregates and the specific conditions at the building site.

NOVACEM CREATIVE 30%

Recommended water quantity 14 – 16 %

Final performance with 15% water/mix ratio*

Compressing strength	1d	$\geq 15 \text{ N/mm}^2$	EN 13892-2
	7d	$\geq 33 \text{ N/mm}^2$	
	28d	$\geq 38 \text{ N/mm}^2$	
Flexural strength	1d	$\geq 3 \text{ N/mm}^2$	EN 13892-2
	7d	$\geq 5 \text{ N/mm}^2$	
	28d	$\geq 6 \text{ N/mm}^2$	
Adhesion	$\geq 2,2 \text{ N/mm}^2$	EN 13892-8	
Chloride ion content	$\leq 0,03 \%$	EN 1015-17	
Capillary water absorption	$\leq 0,05 \text{ kg/m}^2 \sqrt{\text{h}}$	EN 1015-18	
Water vapour permeability coefficient	$\mu \leq 20$	EN 1015-19	
Thermal compatibility part 1:	$\geq 2,2 \text{ N/mm}^2$	EN 13687-1	
Capillary Absorption	$\leq 0,22 \text{ kg/m}^2\sqrt{\text{h}}$	EN 13057	
Reaction to fire	F	EN 13501-1	

* Received data with PLANOCOLOR GRANIT MQ 50 14 or MR 60 00, 20 - 23°C temperature, 60-65% RH without aeration. Values may vary depending on the aggregates and the specific conditions at the building site.

NOVACEM CREATIVE 35%

Recommended water quantity 15 – 18 %

Final performance with 16,5% water/mix ratio*

Compressing strength	8h	$\geq 6 \text{ N/mm}^2$	EN 13892-2
	1d	$\geq 18 \text{ N/mm}^2$	
	7d	$\geq 41 \text{ N/mm}^2$	
	28d	$\geq 47 \text{ N/mm}^2$	
Flexural strength	8h	$\geq 2 \text{ N/mm}^2$	EN 13892-2
	1d	$\geq 3 \text{ N/mm}^2$	
	7d	$\geq 5 \text{ N/mm}^2$	
	28d	$\geq 6 \text{ N/mm}^2$	
Adhesion		$\geq 2,4 \text{ N/mm}^2$	EN 13892-8
Chloride ion content		$\leq 0,03 \%$	EN 1015-17
Capillary water absorption		$\leq 0,04 \text{ kg/m}^2 \sqrt{\text{h}}$	EN 1015-18
Water vapour permeability coefficient		$\mu \leq 20$	EN 1015-19
Adhesion after weathering cycles		$\geq 2,3 \text{ N/mm}^2$	EN 1015-21
Thermal conductivity mean $\lambda_{10, \text{dry, mat}}$ -values (W/m·K)		1,11 W/mK	EN 1745
Capillary absorption		$\leq 0,01 \text{ g/mm}^2$	EN 480-5
Capillary absorption		$\leq 0,22 \text{ kg/m}^2 \sqrt{\text{h}}$	EN 13057
Chloride ion ingress		0,01%	EN 13396
Thermal compatibility part 1:		$\geq 2,2 \text{ N/mm}^2$	EN 13687-1
Wear resistance		A6 // A9 **	EN 13892-3
Reaction to fire		F	EN 13501-1

* Received data with PLANOCOLOR GRANIT MQ 50 14 or MR 60 00, 20 - 23°C temperature, 60-65% RH without aeration. Values may vary depending on the aggregates and the specific conditions at the building site.

** A6 with addition of PLANOCOLOR GRANIT MR 50 14 and A9 with MR 60 00

Application Procedure

Substrate Preparation

The application substrate must be solid, clean, free of constant rising humidity, oils, grease, loose parts and in general materials which might compromise the adhesion of NOVACEM CREATIVE on the substrate. The minimum tensile strength of the substrate must be at least 1,5N/mm². In case of substrates previously coated with paint, we must ensure that the paint coating is completely removed and the substrate is solid and absorbent. In swimming pool applications, it is recommended to waterproof the surface by using SC ELASTIC or SC 200 PENETRATE. Depending on the application thickness the lower the thickness, the higher tensile strength is required from the substrate. In case of existing cracks on the substrate, these should be repaired with the two-component injective epoxy resin adhesive EPO FLUID. Substrates with inadequate mechanical strength must be primed with NOVAPRIMER or WATER PRIMER EPX. For non-absorbent surfaces like existing terrazzo, ceramic tiles or marble, all properly fixed, it is recommended to apply PLANO CONTACT.

Preparation of the mix

Add the quantity of water required by the amount of NOVACEM CREATIVE powder in a suitable container. Proposed ratios are listed in the tables. Slowly and with stirring add the NOVACEM CREATIVE to water and then the granulates. Mix with an electric mixer for at least 3 minutes until you achieve complete homogenization of the mixture without agglomerates. The mixture is ready to use.

Application

Apply the mix with a flat spatula or trowel. Final smoothing can be done by using appropriate finishing tool such as a flat metallic trowel. The application thickness depends on the maximum grain dimension of the aggregates used, where the minimum thickness is 2-3 times the maximum grain size of the aggregates. When thicker coats are required, apply a second coat when the first does not stick to the hand.

The mix has a pot life of 1 hour. During hot periods and in general, it is recommended to avoid direct sunlight exposure of the materials before use, otherwise the working time is reduced.

Final surface with textured finish

After the mortar is leveling and within 30 minutes of application, spray the surface retarder PLANOCOLOR CRT 052. The cleaning of the surface is done by using high pressure water (100 to 180 bar), 12 to 24 hours after application, depending on environmental conditions, but in any case within 3 days of application. In case of rain during the waiting period it is recommended to remove it without waiting.

Note: If during the removal of the material from the surface the aggregates are dormant, reduce the water pressure or wait for another period of time. It is recommended that the test be used on a surface of approximately 1 m² before final application. For more information, refer to the corresponding Product Data Sheets.

Finishing surface with polished finish

If a polished finish is required, a suitable grinding machine must be used. For micro holes occurring during mechanical grinding, either from trapped air or from the removal of aggregates, use as a filler material, depending on the desired effect, one of the NOVACEM MF or PLANOFINISH CRYSTAL products.

After 72 hours (at +23°C & 50% R.H.) the application is completed by waterproofing with the appropriate varnish depending the composition of the mixture and the type of application. In case of floor applications waterproofing is completed with 2 layers of PROTECT 200, PROTECT 300S, PROTECT 900S or WET PLUS S in dependence of the requirements of the application (refer to the relevant Technical Data Sheets of the Products). When NOVACEM CREATIVE is applied inside swimming pools the application of a varnish is not recommended.

Expansions joints

Incorporating expansion joints depends on the use of the surface, geometry of space and the composition of the mixture. In any case there must not exist distance higher than 5 linear meters without expansion joint in exterior areas and 5 - 7 linear meters in interior. In swimming pool applications, it is recommended to anticipate expansion joints in the entire wall to wall and wall to floor connections of the swimming pool's structure as well as every 40 – 45 m² of the surface. All expansion joints must be covered with appropriate sealant.

Recommendations

- Apply in structural stable and well prepared surface
- 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 mix NOVACEM CREATIVE with gypsum, cement, resins, latex or other binders. Mix only with compatible to cement, aggregates and water and in any case not with dolomite aggregates
- Do not apply upon deformable substrates, surfaces subjected to vibration
- Do not apply upon non absorbent substrates such as metal, glass, old ceramic tiles and mosaics without applying appropriate primer
- Permanent water immersion after 7-10 days
- In general case where specific color is required it is recommended to mix with NOVACOLOR OXIDE in appropriate proportions
- Do not apply when temperature of the substrate and environment is lower than +5°C and higher than +35°C
- Application must be done by professional applicator

Consumption

The consumption of NOVACEM CREATIVE depends of the composition of the mixture each time and can be between 0,50-0,70 kg/m²/mm of thickness.

Cleaning

Tools used during the preparation and application can be cleaned with water while NOVACEM CREATIVE is still fresh. If hardening occurs, cleaning can be done only by mechanical means.

Storage

NOVACEM CREATIVE 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 15 kg in pallets of τών 900 kg.

Safety Instructions

For further information refer to the Safety Data Sheet of the product.

Warning

The technical data and recommendations contained in this leaflet correspond to the best of our knowledge and experience. All the above mentioned information in any case should be considered as merely indicate and subject to confirmation after long term practical applications. For this reason anyone interested of using the product must be sure before hand that the product is suitable for the envisaged application. In every case the user alone is fully responsible for any consequences deriving from the use of the product. We retain the right of renewal of the data of the leaflet without warning. For the latest and valid version of the Technical Data Sheet refer to use website www.novamix.gr or directly to the following QR code of the product.



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