

# GEORAPID

**HIGHLY WORKABLE QUICK SETTING AND HARDENING FIBRE-REINFORCED THIXOTROPIC MORTAR WITH LOW ELASTIC MODULUS WITH IMPROVED ADHESION AND COMPENSATED SHRINKAGE FOR THICK STRUCTURAL REPAIRS OF CONCRETE WITHOUT FORMWORKS AND SMOOTHING OPERATIONS**

GRANTS **LEED** CREDITS

CHARACTERISTICS	ENVIRONMENTAL	METHOD OF USE			PRECAUTIONS
	ECO GREEN	RECYCLABLE	MIX MECHANICALLY	APPLY BY INOX SPATULA	APPLY BY TROWEL
					STORAGE: IN A DRY PLACE

## PROBLEM

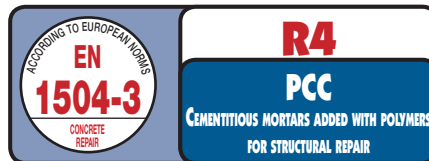
### STRUCTURAL REPAIRS AND SMOOTHING OF CONCRETE WITH A SINGLE PRODUCT



Damaged concrete structures may need structural reinforcement even with low-thickness applications.

## SOLUTION

**GEORAPID** is a pre-mixed cement mortar based on a special high resistance hydraulic geobinder with very high resistance to sulphates, selected aggregates, synthetic fibres and additives, making the product extremely workable and highly adherent to the surface. Since it is easy to use, smoothing in the region of mm can be performed and repairs up to 40 mm thick with a single coat. **GEORAPID** quickly hardens without shrinking and quickly develops high mechanical resistance.



## APPLICATION FIELDS

**GEORAPID** is particularly suitable for thick localised repairs on concrete and for smoothing in the region of mm on beams, pillars, sandwich panels, casts, etc. where high performance mortar is needed.

**GEORAPID** meets the general requirements of EN 1504-9: "Products and systems for protecting and repairing concrete structures" and the minimum requirements of EN 1504-3 for structural mortars in class R4.

## ADVANTAGES

- Easy to use.
- High adhesion to concrete surfaces.
- Highly thixotropic, does not run.
- The compensated shrinkage and reinforcement fibres eliminate the possible formation of cracks, even when applied very thick.
- Single product for 2 purposes: shorter application time and cost savings.

## METHOD OF USE

### • SURFACE PREPARATION

Concrete substrates should be cleaned to ensure excellent adhesion of the **GEORAPID** mortar. You therefore need to remove all loose and brittle parts using a chisel, brush or high pressure water jet. Traces of oils, release agents, rust and dirt in general must be removed.

Any exposed bars shall be cleaned and passivated with STRATO FER or cement grout and STRATO 4900 (1).

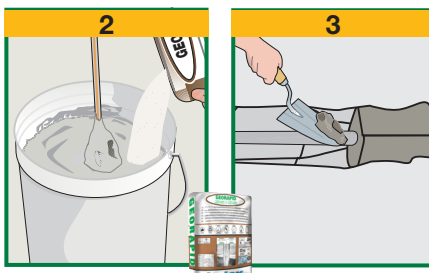
Wet the foundation without creating films of water, which can be possibly eliminated using compressed air or a sponge. Apply the filling mortar using a trowel. When applying on particularly tricky, or very smooth and stressed surfaces you are recommended to add **COLLASEAL** to the mix.



### • MIX PREPARATION

**GEORAPID** needs to be mixed with clean water (4.5 litres per 25 kg bag) (2).

To mix the product, you can use a conventional cement mixer or slow-speed mixing drill, adding **GEORAPID** to the water previously transferred and mixing for 3-4 minutes. Do not mix for longer than it takes to obtain a perfectly smooth mix. Remember that water is an important component of the mortar and is to be added in the recommended quantities so as not to deteriorate any of the product's properties, such as its mechanical resistance, low shrinkage etc.



### • APPLICATION

Apply **GEORAPID** within 10-15 minutes from mixing, in a maximum thickness of 4 cm per coat, until you reach the overall required thickness (3). **GEORAPID** can be applied by hand, using a trowel and a stainless steel float.

### • FINISHING

Reinstated structures can be painted after 4 hours using acrylic water-based paints; leave to dry longer when using solvent-based paints.

### • COVERAGE

Approximately 18 kg/m<sup>2</sup>xcm of thickness.

(See following)

## TECHNICAL CHARACTERISTICS

	Standard	GEORAPID
Appearance		Powder
Colour		Grey
Granulometry		0÷0.7 mm
Apparent density		1.30 ± 0.10 kg/ℓ
Mixing water		18% ± 1%
Storage in original packaging in a dry place		12 months
<b>Mix properties and workability</b>	<b>Standard</b>	
Density of mix	<b>EN 1015-6</b>	1.80 ± 0.10 kg/ℓ
pH mix		12
Workable mix duration (*)		about 10-15 minutes
Inizio/Fine presa (*)		about 20/40 minutes
Application temperature		+5°C ÷ +35°C
Minimum application thickness		2 mm
Maximum application thickness		40 mm
Application		Manual
<b>Performance characteristics</b>	<b>Standard</b>	<b>Product performance</b>
<b>Class and type</b>	<b>EN 1504-3</b>	<b>R4 - PCC</b>
<b>Compression strength - after 28 days</b>	<b>EN 12190</b>	≥50 MPa
Compression strength - after 4 hours		20 MPa
Compression strength - after 24 hours		≥30 MPa
Bending strength - after 28 days	<b>EN 196-1</b>	≥8 MPa
Bending strength - after 4 hours		3 MPa
Bending strength - after 24 hours		5 MPa
<b>Chloride ions content</b>	<b>EN 1015-17</b>	Assenti
<b>Bond strength</b>	<b>EN 1542</b>	≥2.0 MPa
<b>Thermal compatibility frost-thaw cycles - Part 1</b>	<b>EN 13687-1</b>	≥2.0 MPa
<b>Capillarity water absorption</b>	<b>EN 13057</b>	$w \leq 0.5 \text{ kg/m}^2 \cdot \text{h}^{0.5} - W1$
<b>Durability - Resistance to carbonatation</b>	<b>EN 13295</b>	Test passed
Permeability to water vapour	<b>EN 7783</b>	Sd <5 m - class I
Thermal resistance - Operating temperature		-30°C ÷ +90°C
<b>Fire reaction</b>	<b>EN 13501-1</b>	A1
<b>Hazardous substances</b>	<b>EN 1504-3</b>	in accordance to ZA.1 note

Test conditions: temperature 23±2°C, 50±5% R.H. and air velocity in test area <0.2 m/s. The data shown may vary depending on the specific work site conditions: temperature, humidity, ventilation, absorbcency of the base coat.

(\*) The stated times are longer or shorter as the temperature decreases or increases.

In accordance with the general principles defined in EN 1504-9 - Principles for evaluation of the use of products and systems.

(See previous)

### • PRECAUTIONS

- Use cold water in summer and water at 20°C in winter.
- Application temperature from +5°C to +35°C.
- Wet the surfaces before application.
- Do not add water once the mix starts to set.
- Do not add any other materials such as cement, aggregates and additives.
- In hot weather, keep damping the finished mortar surface for at least 24 hours to stop it from drying out too quickly.
- In hot weather, when the temperature is higher than +30°C, the workability time is reduced.

- Do not apply on smooth surfaces.
- Straight after application clean the tools with water and the coated surfaces with a damp cloth.
- Do not expose the material to the sun in hot weather.
- Store in original closed packaging in a dry place.

## PACKAGING

GEORAPID

- 25-kg Sack

• FOR ANY FURTHER INFORMATION OR ADVICE ON PARTICULAR APPLICATIONS, CONTACT OUR TECHNICAL OFFICE • IN ORDER TO CORRECTLY USE OUR PRODUCTS, REFER TO INDEX TECHNICAL SPECIFICATIONS •

**index**  
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the numerous possible uses and the possible interference of conditions or elements beyond our control, we assume no responsibility regarding the results which are obtained. The purchasers, of their own accord and under their own responsibility, must establish the suitability of the product for the envisaged use.

The figures shown are average indicative figures relevant to current production and may be changed or updated by INDEX at any time without previous warning. The advice and technical information provided, is what results from our best knowledge regarding the properties and the use of the product. Considering