



**APPLICATION SHEET**

**Repair of 19<sup>th</sup> and 20<sup>th</sup> century architectural mouldings**

**Repair** your cracked decorative elements and “cement-based” structures in a durable manner using a concrete or mortar made with PROMPT natural cement. **Restore** your moulded decorations, statues, window and door surrounds or “artificial stone” structures using PROMPT natural cement while **preserving the same characteristics as the original material**.



**IMPLEMENTATION**

**Equipment** \_\_\_\_\_

- Mixing trough
- Trowels, hammer
- Dowels
- Straightedges or boards
- Level

**Materials** \_\_\_\_\_

- PROMPT natural cement (CNP)
- TEMPO (retarder)
- Sand 0/2 or 0/4
- Possible pigments
- A fixing structure: stainless steel, brass or fiberglass dowels, together with a light wire reinforcement made of the same materials
- Heavy reinforcement: high-yield steel, diameter 6 to 10 mm if the element is long

**ADVANTAGES OF PROMPT NATURAL CEMENT**

- Durable repair carried out with the original material
- Respect for vapor permeability, modulus of elasticity and original appearance
- Cost-effective solution
- Thick application in a single pass: time saving

**Consumption** \_\_\_\_\_

(per cm thickness per m<sup>2</sup>)




- Cracks: Approx. 7 kg of CNP for 7 L of fine sand
- Elements: Approx. 7 kg of CNP for 7 L of sand

\*1 L = 1 kg of CNP

CNP = PROMPT natural cement

## IMPLEMENTATION

## Dosage

	PROMPT natural cement	 Sand	 TEMPO	 Water
Microcracks	Pure paste (possibly injected with a syringe)	-	0.5 to 1 level cap per liter of cement depending on temperature	1 L
Cracks	1 L	1 L fine sand	0.5 to 1 level cap per liter of cement depending on temperature	0,5 L
Elements	1 L	1 L sand 0/2 or 0/4	0.5 to 1 level cap per liter of cement depending on temperature	0.3 to 0.5 L depending on sand moisture

## Setting time of PROMPT natural cement

Mortar temperature	10° C	20° C	30° C
Setting time without TEMPO*	4 min	2 min	1 min
Setting time with TEMPO*	50 min	25 min	15 min

## Substrate preparation (assessment)

## Identification of the material

- Natural stone?
- Natural cement concrete? (yellow ochre to ochre grey)
- Lime / natural cement concrete? (off-white)
- Conventional grey or white concrete?

**Note 1:** knowing the date of manufacture is useful: in France, PROMPT natural cement progressively replaced stone

from 1850 onwards and until the 1920s; afterwards, conventional cements were used.

**Note 2:** analysis of the surface (beneath any paint layers) also makes it possible to identify the material: hardness, porosity...

## PRELIMINARY RECOMMENDATIONS:

**COLOUR:** final after a few days, generally yellow ochre if the repaired element is made up of successive thick layers or if it is moistened after setting. Or greyish beige if it is used in a thin thickness: cracks and spalls.

To modify it, one may:

- Add natural pigments: yellow or red ochre, sienna, umber...
- Mix with lime to lighten the mix
- Play on the colour of the sand (fines)
- Apply a limewash or an acid wash

**GRAIN:** possibility of "ageing" the surface (same appearance as the surrounding area).

## Substrate preparation

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### Condition of the degraded material

- Soiling: mineral, biological or pollution-related, must first be cleaned
- Elements to be replaced, breaks and cracks: to be repaired according to the techniques below

**Cracks:** open them and clean them.

**Breaks:** cut back, clear and passivate the remaining metallic parts. Install the reinforcement that will ensure the connection between the substrate and the repaired part: drill several holes in the substrate, seal (with CNP) the stainless steel dowels (or others) and connect them with stainless steel wire.

**For long elements:** dowels every 50 cm + heavy reinforcement. Thoroughly wet the substrate; it must be damp but not dripping. Optionally apply a PROMPT natural cement bonding coat just before applying the render, or a bonding primer suitable for your substrate.



## Mortar preparation

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- Dry-mix the PROMPT natural cement, sand, TEMPO retarder (+ pigment) in order to homogenize the mixture.
- Add water and mix until a homogeneous mortar with plastic consistency is obtained.

## Installation of the mortar

**Application:** by trowel, by float.

Proceed, if necessary, in several fresh-on-fresh layers: the next layer shall be applied once the previous one has lost its workability through absorption by the substrate but before the beginning of setting.

Check that the reinforcement is completely covered.

Compact firmly, especially at the edges, in order to obtain good adhesion. If necessary, use the float as temporary formwork or a small template specially shaped for the element to be repaired.

Remove excess mortar from the substrate.



### DO NOT FORGET PPE

Wear appropriate protective equipment. Contact between skin and cement paste, concrete or fresh mortar may cause irritation, allergic reactions or burns.

