



**APPLICATION SHEET**  
**Cast mouldings**

Produce original decorative cast elements using a **minimum number of moulds** thanks to this traditional technique. Due to the rapid setting of this solution, **demoulding is possible between 1 and 3 hours after casting**, while maintaining a high-quality surface finish. Casting is a true craft, and the execution methods are numerous. The dosages, type and grading of sand, as well as workability, will vary accordingly. The standard casting practice is presented in this sheet.



**IMPLEMENTATION**

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

- Electric mixer
- Mould
- Bucket
- Trowel
- Brush

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

- PROMPT natural cement (CNP)
  - TEMPO (retarder)
  - Optional: superplasticizer
- Granular skeleton depending on casting volume:
- Small volume (< 0.5 L): fine sand 0/1 to 0/2 mm or filler, with or without pigment to obtain final color
  - Medium volume (a few liters): fine sand as above + coarser sand 0/4 mm, with optional pigment addition
  - Large volume (> 5 L): add gravel 4/8–10 mm

**ADVANTAGES OF PROMPT NATURAL CEMENT**

- Fast and adjustable setting time
- Improved mould rotation: reduced equipment requirements
- Decorative and original
- Colors compatible with both existing and new substrates

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




(Pour 10 l)

Approx. 7 kg of CNP for 7 L of sand

\*1 L = 1 kg of CNP

## IMPLEMENTATION

## Dosage

	PROMPT natural cement	 Sand	 TEMPO	 Water
Facing layer	1 L	1 L 0/1 or 0/2	0 to 0.5 cap per liter of cement depending on temperature	0.3 to 0.5 L depending on sand moisture
Internal mortar	1 L	1 L 0/4	0 to 0.5 cap per liter of cement depending on temperature	0.3 to 0.5 L depending on sand moisture
Internal micro-concrete	1 L	0.5 L sand + 0.5 L gravel	0.5 to 1 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	Ratio CNP/Sand	10° C	20° C	30° C
Setting time with TEMPO	1/1	50 min	25 min	15 min

## Mould preparation

The mould surface must be clean, the use of a suitable release wax can improve demoulding.

## Mortar preparation

Mixing with an electric mixer provides sufficient energy to obtain the required workability. Several steps are necessary:

The facing layer, which provides the surface appearance, must have a creamy consistency and is applied by dabbing with a brush onto the surface of the mould. The final thickness must not exceed a few millimeters. **To ensure good adhesion**, the second layer is **applied onto the first fresh on fresh**, that is to say before the beginning of setting.

The internal mortar, which forms the body of the casting, depends on its volume:

- Small volumes < 0.5 L: the same mortar as the facing layer is used but with a plastic consistency
- Medium volumes of a few liters: a coarser mortar is poured with a plastic consistency
- Large volumes > 5 L: a micro-concrete with a plastic consistency is poured.

## IMPLEMENTATION RECOMMENDATIONS

- Do not remix after setting has started
- Avoid excess water
- In cold weather: minimum application temperature 2°C; on non-frozen substrates with no frost risk during the day
- In hot weather: avoid mixing above 30°C

## Installation

After casting, compaction is ensured by light vibration. The excess mortar is scraped off. From the beginning of setting, the surface must not be reworked. Do not forget to fix, beforehand, any anchoring elements into the fresh mortar.

With mouldings of complex shapes, difficult to fill and requiring higher strength for demoulding, it is easier to use a mortar with a fluid consistency. In this case, the use of a superplasticizer is necessary in order to reduce the water/cement ratio and improve fluidity.

Not all families of superplasticizers are effective with PROMPT natural cement; consult us for the appropriate choice. The use of superplasticizer requires increased vigilance regarding air removal, as vibration must then be reduced to a minimum.

## Demolding

A simple shape can be demoulded after approximately 1 hour, while a complex shape is generally demoulded after about 3 hours.

The demoulding time has an influence on the surface colour. Early demoulding, especially in humid conditions, results in a more ochre colour, whereas demoulding after several hours gives a greyer tone. This variation in colour can be reduced by adding filler or suitable pigments.

## Curing

Although early strength is relatively high, moist curing for at least two weeks is essential to ensure proper hydration of the mortar surface, preventing surface dusting and possible cracking. Curing is essential to ensure good durability.



## 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.

