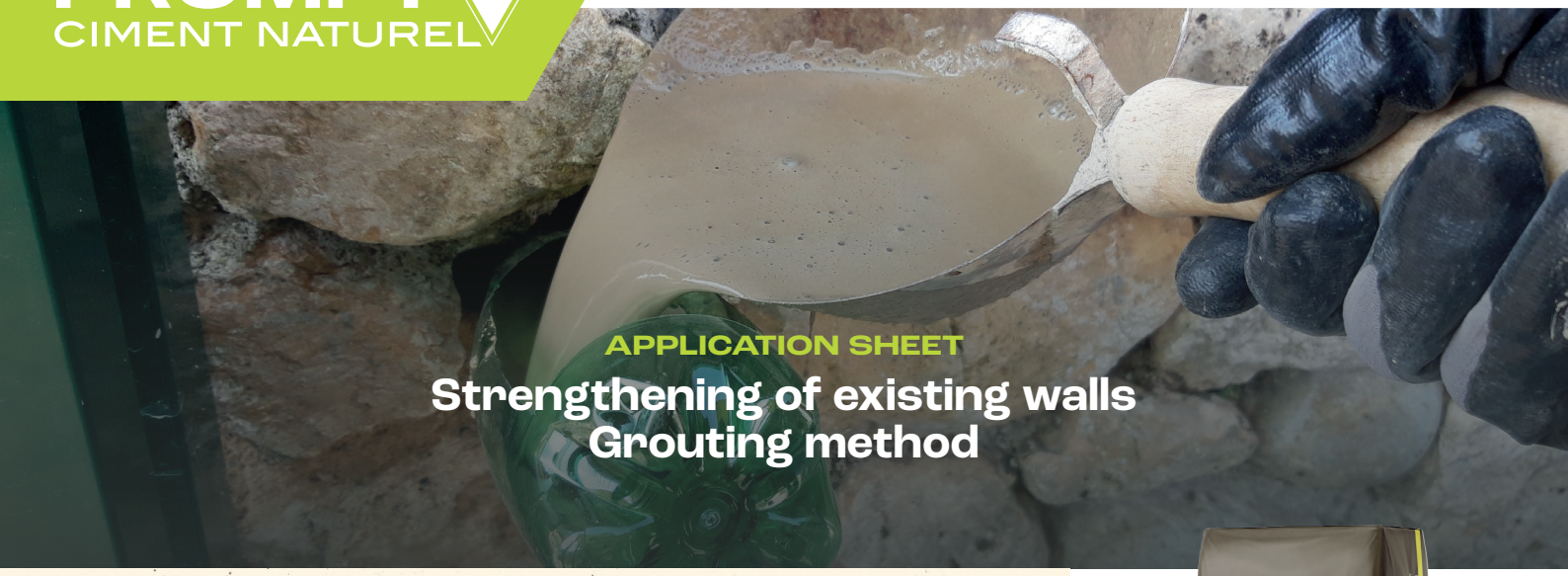
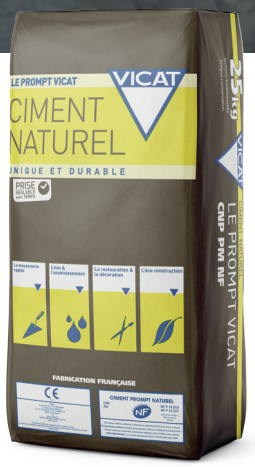


APPLICATION SHEET

Strengthening of existing walls Grouting method



Walls in old buildings often contain **voids not always visible from the outside.**
These may be **double-leaf walls** or deteriorated bedding mortars affected by various aggressions. Their structural rigidity can therefore be reduced. Strengthen these structures using a **grout based on PROMPT natural cement.**
The common practice of **gravity injection** is presented in this sheet.

IMPLEMENTATION

Equipment

- Electric mixer or concrete mixer
- Bucket
- Trowel
- Funnel

Materials

- PROMPT natural cement (CNP)
- TEMPO (retarder)
- Optional: fine sand, NHL 3.5 or air lime (CL90)

ADVANTAGES OF PROMPT NATURAL CEMENT

- Time saving
- Reduced hydrostatic pressure of the grout
- Material savings
- Preserved water vapor permeability

Volume

Approx. 5 to 10% of the masonry volume to be consolidated

**1 L = 1 kg of CNP*

CNP = PROMPT natural cement

IMPLEMENTATION

Dosage

	PROMPT natural cement	NHL 3.5	CL90	Fine sand	Water
Pure grout	1 V	-	-	-	1 V
Grout + aggregates	1 V	-	-	1 V	1 V
PROMPT natural cement + NHL 3.5	3 V	6 V	-	-	8 V
PROMPT natural cement + CL90	5 V	-	4 V	-	9-10 V

To adjust setting time: 0 to 0.5 cap of TEMPO per liter of cement, depending on temperature and required working time

Consumption

	For a cavity of 10 L void
Pure grout	8 kg of CNP
Grout + aggregates	8 kg of CNP + 4 L of sand
PROMPT natural cement + NHL 3.5	3 kg of CNP + 5 kg of NHL
PROMPT natural cement + CL90	5 kg of CNP + 2 kg of CL90

PRELIMINARY RECOMMENDATIONS

→ → Check the masonry bedding mortar. If gypsum is present: do not inject PROMPT natural cement

Start grouting from the bottom in 50 cm lifts

→ In case of rising damp: Use neat grout to block moisture while maintaining vapor permeability

In case of high porosity, dd fine sand (0/1)

→ Adapt grout to stone hardness:

› Soft stone: mix with NHL or CL

› Hard stone: use PROMPT natural cement only

→ Monitor injected volume: Excessive volume may indicate leakage

→ Work in successive levels: Grouting loads the masonry -> risk of wall separation

→ Inject upper levels once the lower level has set

Substrate preparation

- Repoint joints if necessary
- Pre-wet before injection
- Create injection holes 10 to 20 mm in diameter, angled downwards at 45°, at 2/3 of the wall thickness, every 50 cm in a triangular pattern depending on the condition of the masonry; work in sections of 1 m in height
- Use a simple technique: funnel connected to a flexible hose. Temporarily sealed into the injection holes with PROMPT cement

Grout preparation

Mix in concrete mixer or electric mixer:

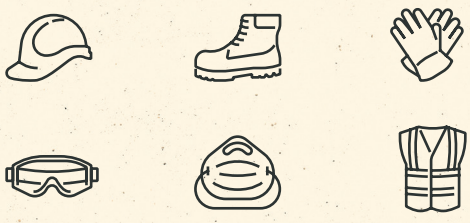
- Introduce half of the mixing water
- Add sand and/or lime if required
- Add remaining water with TEMPO
- Add PROMPT natural cement
- Mix for less than 5 minutes
- Fill the funnel to proceed with injection

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

DO NOT FORGET PPE

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



N'OUBLIEZ PAS VOS EPI !

Portez des équipements appropriés, le contact entre la peau et la pâte de ciment, le béton ou le mortier frais, peut conduire à des irritations, des lésions allergiques ou des brûlures.