

MONUM

LAFARGE NHL 3.5 INJECTION GROUT

Grout consolidation provides new cohesion in old masonry of ancient works. Dismantling is avoided in order to preserve the monument authenticity.

The injection purpose is to re-homogenize the masonry by filling the voids created by past time and restore the original mechanical properties.

1. The study of existing masonry

Identify the materials used to build the masonry: stone nature, mortar type. Do not use lime if the masonry is plaster mounted.

- Estimate wall thicknesses and recognize the soil (adding weight in the wall)
- Estimate the empty volume and therefore the grout volumes.
- For classified monuments, laboratory study of the grout is important

2. Precautions before grouting

- Ensure façade and joints sealing, plastering adhesion and fill the cracks
- Verify wall base sealing to prevent grout leaks and be lost in the ground.
- Use existing holes and joints to inject without drilling.
- Consolidate fragile plaster and set up protection against raising damp
- Protect works fearing humidity: injection causes supply of water.

3. Injecting grout

- Injection by gravity, from top to bottom is preferred to injection pressure
- In case of two injection grouts, less fluid is injected first to fill large voids, more fluid grout is injected to fill fine voids and impregnate bedding mortar
- The injection operation is performed in portions over a height up to 1m
- During the operation, it is necessary to measure the applied amount of product per injector to identify leaks or deformation of structure.
- The time between two injections must match initial curing time (control)

Dosages depend upon support diagnosis, nature of materials and voids to fill.

The dosages below are provided as an indication, with hydraulic lime NHL 3.5 Dosage to be adapted to the voids in the deteriorated wall.

Dosage ranging from Lime: Water = 1:1 to 1:3 by volume

Large fillings require adding sand in the slurry for wall consolidation.

Recommended Lime: Lafarge NHL 3.5 NATHURAL

Natural Hydraulic Lime allows drying in correct time

The user is responsible of material selection for intended use and application.

Supplier's warranty is limited to replace the quantity of defective material