

## Making Lime Mortar with Natural Hydraulic Lime

### Small mixers

1. Introduce 1/2 of the required sand
2. Add all of the lime.

**Mix well (about 2 minutes until uniform colour is achieved)**

3. Add remaining sand.

Mix well again (1-2 minutes)

**4. Continue mixing until required workability is achieved adding water slowly. Time of last mix: approx. 10 minutes.**

### Larger mixers

Introduce equal parts of the required sand.

Add equal part of lime.

Add more sand (in equal parts).

**Mix DRY for a couple of minutes to homogenize and then continue mixing adding water slowly until workability is achieved. approx. 12 minutes.**

**Note:** the best results are achieved by adding water slowly. The mortar should be more like a dough than a slurry. The longer the final mixing time, the more workable (fatter) the mortar will be

A small addition of lime putty (max. 10% of the weight of the NHL binder) can be made. Do not add putty when working with NHL 2. This is to achieve immediate workability and reduce the mixing time. It is not necessary and it is left to the user's preference. If putty is added this should be done before the optimal level of water is added as putty contains water and adding it when the mix is complete would produce a mortar that is too wet and therefore unsatisfactory. The putty addition, within the maximum stated, will reduce the strength of the mortar (see Mortar Tests).

**Dosing:** Use standard buckets, always leveled. Once full, tap on the side to ensure that contents settle and fill to level. Dose at the volumes agreed with the supplier (1:1.5, 1:2 etc./ NHL: Sand). With the correct aggregates and dosages, mortars from Class II to Class IV are easily produced (from 10 to 2 N/mm<sup>2</sup>) by using NHL 5, NHL 3.5 and NHL 2 (see also individual products data sheets).

**Reworking: All St. Astier Natural Hydraulic Lime mortar can be reworked for up to 24 hours (see individual products data sheets). This is due to the absence of cement or gypsum in the lime and to the minimal quantity of aluminates.**

Reworking diminishes potential waste, and lime mortar can be prepared and left overnight so that a quick start can be made in the morning.

When preparing a natural hydraulic lime mortar for later use, place it on a board after mixing and cover it to avoid contact with possible rain or sun. When re mixing lime mortar add the least possible water (in some cases it is not necessary to add any). The tradesmen's good judgment is required.

More on [Lime Mortar for Restoration and Conservation](#)

**For further Guidance, contact your St Astier Distributor.**

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