

Making Lime Mortar with Natural Hydraulic Lime Mixing Guide

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).

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.

PermaLath® 1000 is a self-furred, nominal 1/4" thick glass fiber reinforcing lath. This corrosion-free stucco lath is a superior alternative to metal lath and stucco netting for 1/2" to 7/8" stucco base applications. This is an acceptable lath for NHL exterior stucco when the lath has additional fasteners to limit its flexibility. We will be applying twice the recommended fasteners to the wall.

Natural Hydraulic Lime (NHL 3.5) is the traditional building material used in the USA and across Europe for more than 5000 years; it was supplanted by Ordinary Portland Cement in the 1st half of the 20th century because of the increased speed of building with OPC and the need to rebuild Europe after WWII. NHL mortars and renders are now seeing a resurgence for some very important reasons.

NHL 3.5 is highly vapor permeable. It works with traditional masonry to allow water vapor to transmit through the wall. Unlike OPC and virtually all modern synthetic mortar materials which are designed to be vapor impermeable. It has been shown that condensation and severe weather events can cause

extensive damage in traditional masonry walls when they are covered with incompatible modern cementitious coatings. NHL is a traditional material that works with the traditional masonry. The end result is a finish with lasts substantially longer, one that does not cause additional water problems or permanent damage to the masonry units.

NHL has self-healing properties which allow it to heal small cracks in the plaster that can develop because of wall movement. It also exhibits excellent flexural strength so that it will bend and move with traditional masonry walls when they become saturated during a rain event or heated by the sun. Traditional brick and expand by up to 10% when saturated and lime mortars and plasters allow for this movement without the need for expansion control joints.