

Limetec Hydraulic Lime Mortar

Conventional Mixing

Method Sheet

Introduction

This information sheet has been produced as a guide for the mixing of 25kg and 1 tonne bags of Limetec Hydraulic Lime Mortar with water. If you require further information please contact the LimeTechnology office or the Distributor at the bottom of this sheet.

See Limetec Hydraulic Lime Mortars Data Sheet for technical information.

See Limetec Hydraulic Lime Mortars Method Sheet for Laying Masonry for site application information.

See Limetec Hydraulic Lime Mortar Safety Data Sheet for accident procedures.

See Limetec CPI Site Set Up for silo installation and requirements.

1. Products

Limetec Hydraulic Lime Mortars are available in various strengths. Limetec mortars are a blend of natural hydraulic lime (NHL), high calcium lime (CL90), well-graded aggregates and sometimes pigments; they do not contain patented cements. All mortars are factory batched, ensuring quality and consistency of the dry mortar product.

2. General notes on mixing

For best results Limetec Hydraulic Lime Mortars should be mixed in an M-tec continuous mixer (contact Limetechnology office for further details). However, where this type of mixer is not available a drum mixer can be used. It is also possible to mix the mortar in a bucket using either an electric drill (with whisk attachment), however these methods are best only adopted if small quantities of mortar are required, as they are labour intensive and tiring if the correct consistency is to be achieved. Water must be clean and free from organic matter - tap water is recommended. Depending on the consistency of the mix, approximately 4-5 litres of water is required for each 25kg bag of dry material.

3. Mixing mortar using a drum mixer

- Switch the mixer on and dampen down the inside of the drum before emptying the contents of the bag, as this will help to reduce the amount of airborne dust.
- Once the inside of the drum is coated with a film of water, switch the mixer off and empty the contents of the Limetec Hydraulic Lime Mortar 25 kg bag into the drum.
- Add a small proportion of the water (approximately 20%) to the dry mix and switch the mixer on.
- Allow the water to thoroughly disperse through the mix before more water is added.

EXPLANATION: the lime, which is in a powdered hydrate form, is hungry for moisture and absorbs water like a sponge. It will momentarily hold more water than it can cope with; this is then released, resulting in a saturated or sloppy mix. Through controlling the amount of water that is added, allowing it to thoroughly disperse and keeping the mix slightly lean, the chances of the mortar becoming sloppy and unworkable are greatly reduced.

- Continue to add water in this way, allowing all of the water to combine before adding more.
- When the mix is slightly lean of the required consistency (or once you have added 90% of the water) leave the mortar to turn over in the drum for 5-10 minutes.
- Before the mixing period has expired, add the remaining 10% or enough water to get the mix to the desired consistency.

QUICK CHECK: to check that the lime is of the right consistency, put a small quantity of lime onto the back of a trowel and tap it gently (allowing the mortar to evenly spread across the face of the trowel). Then, holding the trowel steady turn it upside down - the mortar should remain stuck to the trowel and not fall off.

5. Improving the properties of the mix and re-working

The workability of Limetec Hydraulic Lime Mortars can be improved by allowing the mortar to stand after the initial mixing period and then re-working the mix just prior to when the mortar is required.

EXPLANATION: bricklayers prefer a mortar that has an element of "give" as this makes bricks easier to bed down. "Fattening Up" is a term often used to describe the process of improving the workability of the mortar.

- Once the mortar has been thoroughly mixed to the desired consistency, empty the contents into a mortar tub or barrow and cover with a damp hessian or polythene sheet. This will help to control the evaporation of water from the mix.
- The mortar can be left like this for up to 24 hours in normal weather conditions.
- During this period of standing the mortar will stiffen and water will come to the surface - this is quite normal.
- After the standing period the mortar can be dug out and re-mixed. Allow the mortar to turn over in the mixer for at least 5 minutes, during which time the mortar will regain its workability. There is no need to add extra water, however if the mortar does look dry after 5 minutes of re-working add a small amount until the desired consistency is achieved.
- If the mortar appears "dead" or if the consistency does not improve without the addition of excess water, then the mortar has been left standing too long and should be discarded.

TOP TIP: by mixing a quantity of mortar at the end of the day it can be left overnight and then re-worked first thing next day. This will help to control evaporation and save time as work can commence almost immediately the following morning.

6. Cleaning of tools

Trowels are best cleaned when the mortar is still wet, however if the mortar dries it can easily be brushed or chipped off.

7. Health and Safety

Lime is alkaline in nature (Xi, irritating) therefore it is necessary to protect eyes and skin. As a precaution, in case of contact with skin, rinse area with water and dry thoroughly. If contact is made with the eyes, clean water should be used immediately to wash any debris to the outer edge of the eye, medical attention should then be sought. Please refer to the Limetec Health & Safety data sheet or mortar bag for full details.