Limetec Hydraulic Lime Mortar
Repointing with Limepoint mortars

Method Sheet
Introduction
This information sheet has been produced as a guide for the mixing of 25kg bags/buckets of “special” recipe Limetec Hydraulic Limepoint Mortar. The key aspect is to maintain consistency and quality of the finished mortar.

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

NB: Our lime is mixed with aggregate which has a pink tinge. Pigments are added to give the mortar the desired colour. When water is first added to the mortar the pinkness of the aggregate shows through. As the mortar dries and cures the pinkness is replaced by the colour of the pigment and the true colour becomes dominant. This can take a little while.

Mixing the mortar thoroughly is very important. You should use a free fall mixer and mix the mortar dry first to ensure even distribution of the pigment. After adding water you should then mix for at least 10 minutes to allow the lime to absorb the moisture.

2. General notes on mixing
A drum mixer, paddle or whisk can be used and will provide adequate mixing. Water must be clean and free from organic matter - tap water is recommended. Depending on the consistency of the mix, approximately 5-8 litres of water are required for each 25kg bag/bucket of dry material.
Following trials on site to establish workability and colour, record water addition and maintain throughout the mixing period.

Measure dosage of water per 25kg bag/bucket.

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 Limepoint Mortar 25 kg bag/bucket into the drum.
• Add a proportion of the water (approximately 50%) to the dry mix and switch the mixer on.
• Allow the water to thoroughly disperse through the mix before more water is added.

Make sure the mix is thorough and that the mortar is constinent and creamy - approx. 8-10mins mixing time.

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.

4. Improving the properties of the mix and re-working
The workability of Limepoint 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.

• 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 12 hours in normal weather conditions

5. Preparation & Application

Joints must be raked out to a minimum depth of 2 x joint width, or until stable material is reached. Use appropriate hand tools (joint raker) brush out any loose materials and dust from the open joint.
Damp down the stonework/ brickwork and the mortar joints, but ensure there is no excess water on the surface.
The mortar mix needs to form peaks but should not be so stiff that you cannot turn it easily with a trowel or scoop.

6. Repointing with mortar gun or bag injection:

Mortar Gun

Using a trowel or scoop load the “empty cartridge” of the mortar gun.
The cartridge is then fitted to the gun-frame and pumped through to the nozzle by squeezing the trigger that gradually drives the plunger deeper into freshly-filled cartridge, extruding the mortar in the process.

- If you need to adjust the mix, return what is in the cartridge to the bucket.
- Small amounts of extra powder or water can make quite a difference so make adjustments incrementally.
- Move the nozzle along the joint at a steady speed according to the flow of mortar. Joints should be filled to just overflowing. Carefully watch what you are doing and if gaps appear fill them in as you go.
- You can fill either perps or beds first. There are benefits to both ways but see what works for you.
- Try to avoid letting the nozzle drag along the brick as if it catches a crease or similar the gun and the bead of mortar are liable to be diverted onto the face of the brick.
- The joints are filled to surcharge, but care taken to prevent excess mortar staining the joint edges.
- Once you have emptied the cartridge, refill and continue.

Bag Injection

The pointing bag and tip can be prepared for use by trimming approx 1cm off the “pointed” end, pushing the metal tip into place and then taping the tip and the end of the bag together. This is not essential but reduces the likelihood of the tip being pushed back into the bag in use.
If the joints you need to point are at all narrow, it is also useful to squeeze the metal tip with pliers or a vice so that the hole is more oval than round. This gives you the option of turning the bag and tip to adjust the size of the bead of mortar being applied. Fold the top of the bag down 4 or 5 inches.

- Scoop some mortar into the bag up to about half full. At this point you can assess the mixture. It should be justdropping out of the bottom of the bag in blobs. If it is pouring out it is too wet and if it isn’t coming out at all it may be too dry. If you need to adjust the mix, return what is in the bag to the bucket. Small amounts of extra powder or water can make quite a difference so make adjustments incrementally.
- Once the correct consistency is achieved at, scoop the mortar into the bag. The full part of the bag should be 10-12 inches. Twist the end of the bag tight to provide consistent pressure to the contents.
- Hold the bag lightly in your left hand and twist the end with your right hand (assuming you are right handed). The pressure from the twist will eject mortar into the joint to be filled. Try to maintain consistent pressure and avoid squeezing the middle of the bag if possible.
- Move the tip along the joint at a steady speed according to the flow of mortar. Joints should be filled to just overflowing. Carefully watch what you are doing and if gaps appear fill them in as you go.
- You can fill either perps or beds first. There are benefits to both ways but see what works for you.
- Try to avoid letting the tip drag along the brick as if it catches a crease or similar the bag and the bead of mortar are liable to be diverted onto the face of the brick.
- The joints are filled to surcharge, but care taken to prevent excess mortar staining the joint edges.
- Once you have emptied the bag, refill and continue.

7. Jointing the beds

The time it takes for the mortar to go off varies with the brick type, joint depth and prevailing conditions. Keep checking the mortar which was applied first. Once you can put a finger imprint in the drying mortar without any residue sticking to your finger, it is about ready to strike off.

- Do Not over work the mortar
- Do Not steel trowel the finish
- Do Not strike the face of the mortar with a pointing iron, which would close off the pore structure
- Tool the joint beds first, perps second. This helps to avoid smudging the mortar on to the brick face.
- Compress the surface of the mortar using a hardwood stick approximately the same width of the joint (10mm)

with a face cut at a 45° angle.This is also known as “rubbing up” as the stick is being pulled along the face of the joints. This action, as well as compressing/consolidating the mortar is also opening up the texture of the joint. If any holes appear in the joint fill them with mortar and repeat the process.

A flat profile must be maintained on the surface of the stick otherwise the joint will become rounded (this step may be omitted if the work is very tidy).

- Using a churn brush or naturally bristled stiff brush, beat the surface of the joint flat on (do not drag as this may lead to staining of the brickwork). This will compress/consolidate the mortar and exposes the coarser aggregate. If holes appear in the mortar, fill them and repeat the process. Loose material should fall away from the brickwork.
- To finish the area off use a soft brush across the face of the whole wall to remove further loose material.

NOTE: If mortar gets onto the face of the brickwork/ stonework brush or beat it off when it is dry. Removal whilst the mortar is wet will spread staining. Stains can be removed using a mild brick acid however; the natural weathering process will remove most stains over the winter period.

8. Weather Conditions

This is a sand and lime based mortar so it should only be applied in conditions of 4°C and rising.

Mortar should not be used if the temperature is at 5°C and falling. Attention must be given to the weather forecast before and for at for at least 24 hours after laying masonry.

Work should not be carried out if the temperature reaches 30°C. In warm weather it is advisable to damp down the brick/stone to avoid the substrate taking moisture from the mortar [see working with Lime Mortar in Winter Conditions or check with Limetec for advice].

The mortar remains workable for upto 2 hours and dries in 24-48 hours. Protect from frost and rain for 48 to 72 hours. In excessively warm or windy conditions where the mortar might cure too quickly, the bricks can be wetted with a spray mister to slow the curing down.

9. Tools required

Few tools are needed for the “jointing up” process, but include; a stick , phosphor bronze brush, a churn brush, and a naturally bristled or soft textured broom head/brush.
Finally, clean all tools and buckets used. The mortar gun or pointing bag can be washed out and stood up to dry before being reused.

10. Quality Assurance

The product constantly undergoes third party and in-house monitoring, using tested and certificated quality management systems conforming to the current international standard EN ISO 9001 and the environmental standard EN ISO 14001.

11. Health and Safety

Refer to Health and Safety datasheet