

### 1. Introduction

When using hydraulic lime mortars for construction or renovation work there are some important differences that need to be adhered to compared to using sand and cement mixes.

The following document gives an overview of these differences; more detailed information is available on specific topics and these can be obtained from Unity Lime Products upon request or via [www.unitylime.co.uk](http://www.unitylime.co.uk)

### 2. Protection

In order to ensure that the mortar achieves its optimum initial set, suitable protection against extremes of temperature, driving rain, sunlight and wind must be taken.

Lime mortar takes longer to achieve its full set and colour when compared to sand and cement meaning that protection during the first few days after use are critical.

Lime mortar **MUST NOT** be used above temperatures of 30 degrees Celsius. For colder temperatures, **DO NOT** lay bricks if temperature is **5°C** and falling or **ONLY USE** if temperatures are **3°C** and rising (same Code of Practice for all mortar types).

### 3. Site Practice

Before laying bricks/stone they should be suitably wetted to achieve a good bond between mortar and masonry. Masonry with high porosity should be pre-wetted as too high suction rate will have the effect of the mortar going "dead".

Failure to do so will cause the moisture in the mortar to be sucked out resulting in an ineffective bond and pointing to be very difficult.

The higher the porosity of the masonry, the more wetting is required ranging from dipping the masonry into a bucket of water to spraying the units with a hose (allow excess water to drain).

### 4. Preparation

Prior to re-pointing, joints should be raked out to at least twice the joint width or until a stable base is reached. Joints should be free of dust and other contamination.

### 5. Mixing Instructions

Use clean, potable water only, 4.5 litres per 25kg bag. Unity Hydraulic Lime Mortars are pre-blended and require no other additives.

Once mixed, the mortar should be of uniform consistency and be able to hold onto the trowel.

#### Mixing using a bell or pan mixer

Wet down the inside of the mixer whilst it is running to create a film of water that will help minimise airborne dust.

Stop the mixer and add the dry pre-mixed mortar with a small quantity of water, approximately 1 litre. Start the mixer and allow the water to fully disperse. Then slowly add water at a rate that allows it to be fully adsorbed before adding more.

Once approximately 4 litres has been added let the mixer run for 10 minutes then slowly add the remaining water or until the required consistency is achieved.

#### Mixing with a paddle mixer

Pour the required water into a clean bucket or similar container.

Carefully add the pre-mixed mortar.

Mix using the paddle mixer for a minimum 3 minutes.

Unity hydraulic lime mortars are factory batched under strict quality control to achieve specific strengths, colours and textures.

# Site Guidelines

## Pre mixed Hydraulic Lime Mortar

By mixing mortar at the end of the day, it can be left overnight and then re-worked first thing the next day. This will help to control evaporation and improve consistency of the mix which will increase the number of courses that can be laid per day.

### 6. Laying Brick and Blocks

Lime mortar can be used to lay bricks and blocks up to 1.2m height in any one day thus reducing the risk of instability. A reduction in this height is recommended for dense bricks with lower water absorption and in adverse weather conditions.

### 7. Colour

Lime mortar take time to achieve their true colour, typically 1-2 months under normal circumstances, but can take longer in variable weather conditions.

Due to its vapour permeability, lime mortar can draw impurities and minerals out of the bricks and this can result in a “bloom” deposit on the mortar. This can be simply washed off with water and \ or a soft brush. Alternatively it can be left to wash off naturally with rainfall.

### 8. Health and Safety

Refer to Health and Safety guidelines for full details however it should be specifically noted that hydraulic lime is highly alkaline and therefore suitable PPE should be utilised.