

Mortar for AH Bricks

The basic ingredients of Mortar- Portland cement, lime, sand, and water-are the same as other types of masonry unit. However, several aspects of AH Brick construction differ.

First, the brick has a low porous, so they don't draw in or absorb moisture from the mortar as quickly as standard masonry units. Second, AH Bricks generally are heavier than standard masonry.

Moisture Content

The mortar for AH Bricks should be as workable as conventional mortar, although a bit drier and stiffer. It is necessary to control the moisture content to get proper stiffness.

If necessary, strengthen up the mortar mix with more Portland cement.

Mortar joint thickness can be reduced to 6-8 mm for aesthetic reasons and to assist with moisture content.

Cold Weather Laying

Denser, less porous architectural bricks can take longer to lay in cold weather. This is because the setting time of the mortar takes much longer to harden and take on strength. The excess water in the mortar, which is normally taken up by the hydration process in warmer weather, remains for an extended period to impede progress. In a more porous brick, the excess water may be sucked up into the brick, partially offsetting this issue. In short, the colder temperatures slow down markedly the chemical reaction (the hydration process) in the mortar leading to slower setting times.

The most practical way to remedy this is to vary the mortar mix design to say 4:1 sand/cement ratio. This is common practice in cold weather locations such as the UK. Also, an accelerator and water reducer may be used. It may be worth considering extending the mixing time of the mortar and reducing the water content to make a stiffer mortar. Also, keep bricks **covered and dry prior to laying**.

Mortar Additive Guide – Clay Limil

To improve mortar workability—especially in cold weather or when a stiffer mix is needed—many experienced bricklayers choose to add a small amount of clay limil.

One commonly used mix ratio is:

Per batch:

- 18 shovels of brick sand
- 1 x 20kg bag of cement
- 1.5 shovels of hydrated lime
- 0.5 shovels of clay limil

Note: The ideal amount of clay limil will depend on the sharpness and clay content of your sand. Sands with higher clay content or finer grading may require less additive, while sharper sands may benefit from a little more.

Adding too much can make the mortar overly sticky, which may reduce workability or make it harder to achieve clean joints—especially with face brickwork.