

TRADITIONAL MORTAR

MORTAR – Traditional Lime mortar

Traditional lime mortar is plastic – it moves and expands and contracts with the foundation – for brick this is vital, but even for stone it is important. This is a time-tested (not laboratory tested) material. Your original mortar lasted a century or more – using the same material again should give the same long life to your foundation.

MATERIALS

Type S hydrated masons lime (1)
Water
Mason's sand – fine

EQUIPMENT

Eye Protection
Gloves
5 gallon bucket with cover (maybe 2)

One 40 lb bag Type S hydrated masons lime to 5 gallons water (You will probably need TWO five gallon buckets to mix it in)

OR

Same proportions – 20 lbs Type S hydrated masons lime to 2½ gallons water (Should be able to mix in one five gallon bucket – get one with a lid)

1) Making the LIME PUTTY

The first step is mixing the lime putty - later you will add sand to make mortar. Mix the water with the lime in the bucket until it is about the consistency of pudding. Mixing up a large batch is fine - this stuff does not go bad - you could leave it in a covered container for a decade with a skin of water on top and it would only improve with time. The mixture will heat up as you work – wear hand and eye protection.

Let the lime putty sit after it is mixed for at least a few hours - a few days is better. (To make this lime, it is baked at a high temperature to drive off the moisture. By adding water back in the right proportion, you are re-hydrating it. You could leave it for a month and you would have to stir it up a little, but it would still be fine)

2) Making the mortar

Once the lime putty has aged, mix it with sand in this proportion:

- 1 part lime putty
- 3 parts mason's sand (available at Statler Brothers or Consumers Concrete - NOT baby sand – mason's sand)

You may need to add a little water - but only a little – sometimes it works better to wet the sand a little before you mix it in. The mortar should be a little crumbly and a little moist – similar in texture to all natural peanut butter. Once this is mixed, keep it covered and let a little skin of water sit on top and it will last a long time – years – even decades.

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3) Cleaning out the old mortar or whatever gunk previous owners used

Serious, but not expensive equipment

1. Hand drill (2 lb or 3 lb short handled blunt hammer – looks like a mini sledge hammer available at Consumers Concrete on East Michigan)
2. Mortar chisel (Consumers Concrete on East Michigan)

Equipment you may already have around the house:

Hammer – heavier is better
Flat blade screwdriver

EQUIPMENT - Eye protection – ALWAYS!!!

Remove the old mortar

Use as little force as possible- so if the old mortar is loose and you can just pull it out with your chisel or screwdriver – go for it. To get a good joint you will need to clean out old mortar to a depth equal to twice the width of the mortar joint. So, for example, if you have a mortar joint between stone blocks that is one inch wide, you will need to clean out two inches deep. If you have a half inch joint, go one inch deep. The width of the joint may vary and so should the depth you clean out.

Clean the joint

Brush out the joint – get all the loose stuff out. A cheap bristle brush works well for this. (If you are repointing soft old brick, wet the surface of the cleaned joint before you add in the mortar. This keeps the brick from pulling water out of the mortar too fast. A spray bottle of water works great for this.)

4) Refill the joint with mortar

Equipment:

Mortar bag (for deep or really irregular joints)

Slicks (tools used to push the mortar off the hawk into the joint) – 2

Hawk (mortar board – a board about one foot square with a round handle on the bottom)

This can be done with a mortar bag (like a giant pastry bag) if the joints are deep and you have volume to fill. Or do it with traditional mason's tools called "slicks" – these are available at Consumers Concrete (better quality if your job is big) or Lowes. Buy two - a smaller one for tight spots and a second one a little larger, but still just a little smaller than your average mortar joint.

Scoop some mortar onto your hawk – take it over to your clean joint and push the mortar off the hawk into the joint – press a little on the mortar as you fill the joint to fill the joint and push out air.