Lime Mortar

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Carbonation

- Drying, the mortar must dry enough to allow air in.
- CO2 from the atmosphere diffuses into water in the pores in the masonry. (So the masonry must be neither too dry, as you need water in the pores, nor saturated, so CO2 can get in)
- Carbonic Acid forms from the dissolved CO2 which reduces the ph of the water in the pores, making it slightly acidic
- The acidity causes dissolution of highly alkaline Ca(OH)2 (Calcium hydroxide) into the water in the pores
- A reaction then takes place between the Calcium ions from the lime and the Carbonate ions from CO2 to form CaCO3 (Calcium Carbonate) in solution
- The dissolved Calcium Carbonate is then deposited on the solid material around the pores binding it together.





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