MIKE WYE

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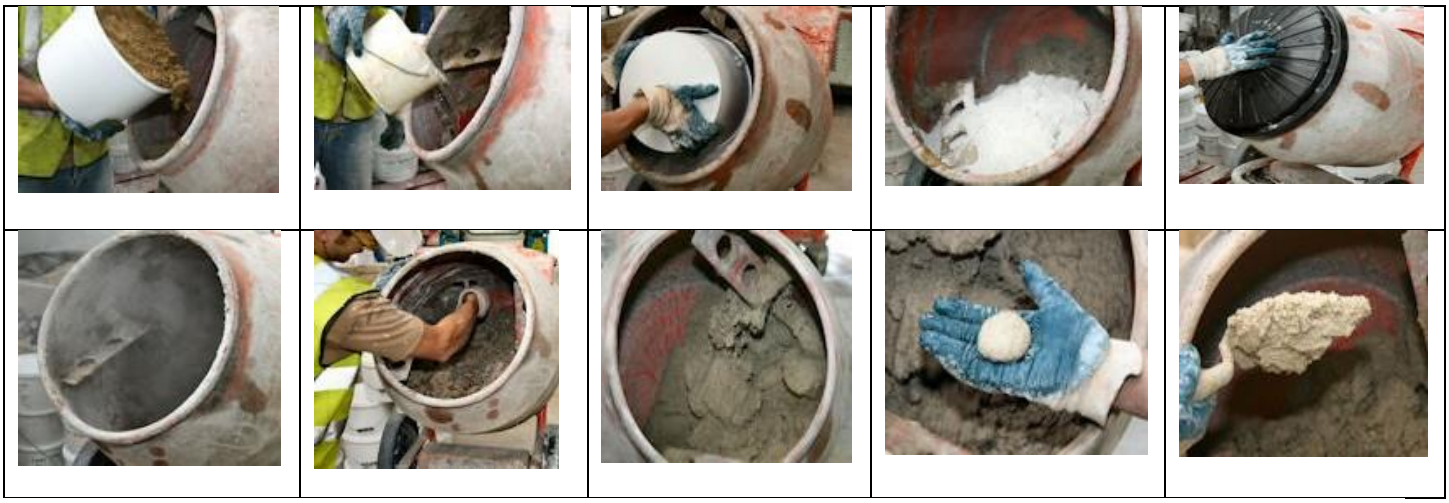
Mixing Natural Hydraulic Lime

It is essential that lime is uniformly dispersed and that any fine agglomerations are broken down. The time of mixing will be controlled by the efficiency of the mixer. Roller-pan mixers and screed mixers have the most efficient action, but simple tilting-drum cement mortar mixers can be used if a longer mixing time is allowed. If the job is sufficiently large use a mixer with a capacity for a full bag of lime.

The following sequence will be suitable for a tilting-drum mixer.

- When mixing wear protective goggles and waterproof gloves.
- Introduce half of the sand and add all of the lime, mix well for 2 to 5 minutes until a uniform colour is achieved.
- Stop the mixer and isolate the drive. Scrape down any material adhering to the back. Add the remaining sand and mix again for 2 to 5 minutes to get uniform dispersion.
- Continue mixing adding water slowly over at least 10 minutes and giving plenty of time for water to be fully incorporated. The mortar should be more like a dough than a slurry and the less water added to achieve this, the better the mortar performance will be.
- The longer the final mixing time the more workable (fatter) the mortar will be. Workability will be improved by allowing mixed mortar to stand for 15 minutes or longer before re-mixing for a further 5 minutes (in hot weather do not over-mix as water will be lost through evaporation).



Additions

Gauging hydraulic limes is not normally required although addition of pozzolanic materials can improve the hydraulic activity and performance in some applications. Materials such as used crushed brick, fly ash, ground granulated blast furnace slag (GGBS), or metakaolin (Argical) may be used to increase the mortar strength designation.

The addition of hydrated lime or lime putty can improve the plasticity of the mix but may reduce the mortar strength designation. It is recommended that trial mixes be produced to establish the optimum properties for a particular application.