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# Mechanical and Physical Properties of Natural Additive Dispersed Lime

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## Abstract

Influence of natural additives on mechanical and physical properties of hydraulic lime mortar has been investigated experimentally. Results revealed that organically modified lime mortar enhances the compressive strength significantly as it improved the bond between two consecutive lime particles in the matrix. Results also reflected that organically modified lime mortar with longer curing periods increased the compressive strength compared to reference mortar made of lime without organic addition. It is due to the presence of proteins and carbohydrates in the organic additives that influences the carbonation and hydraulic reaction in the lime matrix which helps to enhance the compressive strength of modified mortar. Addition of organic additives in lime mortar also reduces the porosity in the matrix and increases the hydrophobic nature and reduces water affinity of the hydraulic lime mortar.

*Keywords:* Hydraulic Lime; Natural Additives; Compressive strength ; Porosity; Organic

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