

# Comparison between Hydrated Lime Dry Powder and Slurry on Peat Soil Stabilization

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## ABSTRACT

*This study investigates the effect of soil stabilization using hydrated lime on peat soil. Hydrated lime admixtures were prepared in two different methods; namely: lime powder (dry) and lime slurry. The stabilization of soil samples were performed under three different proportions which are 3%, 6% and 9% of weight of dry peat soils. Compressive strength of stabilized peat soil under different mixtures process were evaluated by unconfined compressive stress test (UCT), and the performance of this admixture will be compared. Three different curing times are considered, namely; immediate, 3 days and 7 days curing period. Lime slurry method for peat soil stabilization is more effective compared to lime powder admixture. Results obtained from the tests shown that the Unconfined Compressive Strength values under lime slurry were increased with the increasing lime percentage and longer curing time period. The maximum improvement was 950 % under lime slurry and for 7 days curing period compared to the untreated peat soils. However the unconfined compressive strength for lime powder decreases around 60% to 63% with the increment of curing period.*

**Keywords:** *Peat soil, Lime stabilization & Unconfined Compressive strength*