
Bulk Densities of Selected Dried Natural and Fired Kaolin Clays

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Abstract: Bulk (lump) densities of 31 kaolins were measured on the clay in the natural or raw state after drying at 100° C and after firing to 1510° C (2700° F). The kaolins were selected from such diverse origins as surface-weathered and sedimentary accumulations, hydrothermally altered bodies and flintclay deposits. The sedimentary group ranged in density from 0.82 to 1.85 in the dried raw clay, and 1.93 to 2.63 when fired. The hydrothermally altered clays ranged from 1.83 to 2.50 in the dried raw state, and 2.02 to 2.66 when fired. Flint clays ranged from 2.20 to 2.60 in the dried raw state (a "toasted clay" from Russia, 1.75), and 1.99 to 2.70 when fired. The effect of the genetic process on bulk density values is discussed and related.

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