

SWELLING CLAY IDENTIFICATION

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ABSTRACT

It is inexact to speak of "swelling clays" and "nonswelling clays." The highly swelling clays and the poorly swelling clays are merely end members of a continuous natural range. Identification of a clay as a montmorillonite does not tell whether it is a highly swelling or a poorly swelling clay. Lattice expanding ability as observed in the usual X-ray test is not directly related to macroscopic swelling ability; and swelling ability cannot be predicted from such an X-ray test. Swelling ability cannot be predicted from chemical analysis or particle size analysis. At the present time, the only reliable way to identify a clay as a highly swelling or poorly swelling clay is to perform a swelling test on it.