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AS 1289.5.7.1-1993 Methods of testing soils for engineering purposes - Soil compaction and density tests - Compaction control test - Hilf density ratio and Hilf moisture variation (rapid method)

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Abbreviation

AS 1289.5.7.1-1993

Valid from

18/01/1993

Information provider

SAI Global

Author

Standards Australia

Information type

Australian Standard

Format

PDF, Hard copy

Cited By

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Description

This method sets out a rapid method for determining compaction control parameters for soils. The method involves relating converted wet density (CWD) of the laboratory-compacted soil to added moisture (Z) without the need to determine moisture content.

The test is based on standard compactive effort in accordance with AS 1289.5.1.1. If modified compactive effort in accordance with AS 1289.5.2.1 is used, experimental data must initially be accumulated for that particular soil in order that the moisture variation can be reliably assessed.

Because it is rapid method, minor differences between results obtained by this rapid procedure and the results obtained by the method of compaction control given in AS 1289.5.4.1 may occur.

Scope

The procedure is applicable to that portion of soil which passes a 37.5 mm sieve. Corrections for up to 20% oversize material can be made to values determined by this method. Soil which all passes a 19.0 mm sieve is compacted in a 105 mm diameter mould. Soil which contains more than 20% of material retained on a 19.0 mm sieve is compacted in a 152 mm diameter mould.

Because of the omission of proper curing, the method might not be reliable for soils that are much wetter or dryer than the optimum moisture content.

Further, because of the empirical basis for the calculation of moisture variation, the method is limited to added moisture values (Z) between - 4% and + 6%.

The method may be used for checking material before placement to ensure that the moisture content is within specified limits (see Note 2).

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