

Australian Standard™

Methods of testing soils for engineering purposes

Method 5.8.8: Soil compaction and density tests—Nuclear surface moisture-density gauges—Water content of a standard moisture block using proportion of water

1 SCOPE This Standard sets out the method for the determination of the assigned water content of a standard moisture block for use in the calibration of nuclear surface moisture-density gauges in accordance with AS 1289.5.8.4. The block shall consist of a regular array of vertical aluminium plates separated by air gaps that can be filled with water. Guidance on the number of blocks required for a set of standard moisture blocks is given in AS 1289.5.8.4.

NOTE: A standard moisture block with water content assigned in accordance with this Standard may be used as—

- (a) a standard moisture block for use in the calibration of nuclear surface moisture/density gauges in accordance with AS 1289.5.8.4; or a
- (b) a primary standard moisture block for use in AS 1289.5.8.9.

2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS

1289 Methods of testing soils for engineering purposes

1289.5.8.4 Method 5.8.4: Soil compaction and density tests—Nuclear surface moisture-density gauges—Calibration using standard blocks

1289.5.8.9 Method 5.8.9: Soil compaction and density tests—Nuclear surface moisture-density gauges—Water content of a standard moisture block using comparison against primary blocks

3 APPARATUS The following apparatus shall be used:

- (a) Standard moisture block, comprising of a regular array of vertical aluminium plates separated by gaps that can be filled with water, as defined in AS 1289.5.8.4.
- (b) Micrometer, covering a range of 0 – 25 mm, with an uncertainty of measurement not exceeding 0.01 mm.
- (c) Steel ruler, of length at least 600 mm and graduated in 0.5 mm divisions.

4 PROCEDURE Proceed as follows:

- (a) Measure the individual thickness of at least 10 randomly selected plates used in the construction of the block.
- (b) Measure the length of the laminated section of the block, to include at least 50 plate and water gap pairs.
- (c) Record the number of pairs over which the measurement at Step (b) is made.