

Australian Standard®

Methods of testing soils for engineering purposes

Method 6.8.1: Soil strength and consolidation tests—Determination of the resilient modulus and permanent deformation of granular unbound pavement materials

1 SCOPE This Standard covers the determination of both the resilient modulus and permanent deformation of unbound pavement materials with a maximum particle size not exceeding 19 mm using repeated load triaxial equipment with static confining pressure and an external vertical displacement measuring device under undrained conditions without pore pressure measurement. The same apparatus and similar test procedures are utilized to determine both of these properties. The resilient modulus test characterizes the material response over a range of applied dynamic stress conditions assuming isotropic behaviour. The permanent deformation test characterizes the plastic strain response at one stress level over a large number of repetitions.

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

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| 1141 | Methods for sampling and testing aggregates |
| 1141.3 | Sampling of aggregates and rock |
| 1152 | Specification for test sieves |
| 1289 | Methods of testing soils for engineering purposes |
| 1289.1 | Method 1: Preparation of disturbed soil samples for testing |
| 1289.2.1.1 | Method 2.1.1: Soil moisture content tests—Determination of the moisture content of a soil—Oven drying method (standard method) |
| 1289.5.1.1 | Method 5.1.1: Soil compaction and density tests—Determination of the dry density/moisture content relation of a soil using standard compactive effort |
| 1289.5.2.1 | Method 5.2.1: Soil compaction and density tests—Determination of the dry density/moisture content relation of a soil using modified compactive effort |
| 1289.E5.1 | Method E5.1: Soil compaction and density tests—Determination of minimum and maximum dry density of a cohesionless material |
| 1289.F4.1 | Method F4.1: Soil strength and consolidation tests—Determination of the compressive strength of a soil—Compressive strength of a specimen tested in undrained triaxial compression without measurement of pore pressure |
| 1349 | Bourdon tube pressure and vacuum gauges |
| 1545 | Methods for the calibration and grading of extensometers |