Australian Standard™

Methods of testing soils for engineering purposes

Method 3.5.1: Soil classification tests—Determination of the soil particle density of a soil—Standard method

1 SCOPE

This Standard sets out the method for determining soil particle density by using a density bottle for the fine fraction of a soil and by weighing in water for soil particles retained on a 2.36 mm sieve. The soil particle density of the soil is the weighted average of the two values.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS	
1152	Specification for test sieves
1289	Methods of testing soils for engineering purposes
1289.0	Part 0: General requirements and list of methods
1289.1.1	Method 1.1: Sampling and preparation of soils—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)

3 APPARATUS

The following apparatus is required:

(a) Density bottle of approximately 250 mL capacity.

(b) Desiccator.

(c) Drying oven complying with AS 1289.0, thermostatically controlled to operate at 105°C to 110°C.

(d) Balance with a limit of performance not exceeding ±0.05 g.

(e) Balance with a limit of performance not exceeding ±1 g.

(f) Thermometer to cover the range 0°C to 100°C, graduated to 1°C and with an uncertainty not exceeding 0.5°C.

(g) A 2.36 mm sieve and pan as designated in AS 1152.

(h) Means of obtaining a vacuum (e.g., a filter or vacuum pump).