Australian Standard®

Methods of testing soils for engineering purposes

Method 3.8.1—Soil classification tests—Dispersion—Determination of Emerson class number of a soil

1 SCOPE This method describes the procedure for the determination of the Emerson class number of a soil. Soils are divided into seven classes on the basis of their coherence in water with one further class being distinguished by the presence of calcium-rich minerals.

2 REFERENCED DOCUMENT The following document is referred to in this Standard:

AS
1152 Specification for test sieves

3 APPARATUS The following apparatus shall be used:

(a) 250 mL beakers (squat pattern).

(b) Sieves, 4.75 mm and 2.36 mm aperture as designated in AS 1152.

(c) Spatula.

(d) Test tubes.

4 WATER The water used shall be either distilled water or water from the environment of the soil, e.g. reservoir water or other water with which the soil will be in contact.

5 PROCEDURE The procedure shall be as follows:

(a) Obtain a few grams of air-dried soil and screen through 4.75 mm and 2.36 mm sieves. Select three crumbs (six if reservoir or other contact water is also to be tested) retained on the 2.36 mm sieve.

(b) Put 200 mL of water in a beaker, place three of the air-dried crumbs in the beaker spaced equally around the side. Do not stir or otherwise disturb.

(c) Record the following:

  (i) Time of placing the crumbs in the water.

  (ii) Whether slaking occurs (see Note 1).

  (iii) The time when dispersion commences (see Note 2).

  (iv) The time when crumbs disperse completely.

  (v) The nature of the water.

  (vi) The temperature of the water.