

STANDARDS ASSOCIATION OF AUSTRALIA  
 Australian Standard  
 METHODS FOR SAMPLING AND TESTING AGGREGATES

AS 1141.52  
 UNCONFINED COHESION OF COMPACTED PAVEMENT  
 MATERIALS

**1 SCOPE.** This standard sets out the method for determining indirectly the unconfined cohesion of compacted pavement materials.

This method is applicable to that fraction of the material passing a 19.0 mm test sieve.

**2 REFERENCED DOCUMENTS.** The following standards are referred to in this standard:

- AS 1012 Methods of Testing Concrete  
 Part 9—Method for the Determination of the Compressive Strength of Concrete Specimens
- AS 1141 Methods for Sampling and Testing Aggregates  
 1141.2 Testing Equipment\*  
 1141.3 Sampling of Aggregates and Rock
- AS 1289 Methods of Testing Soils for Engineering Purposes  
 1289.E2.1—Soil Compaction and Density Tests—Determination of the Dry Density/Moisture Content Relation of a Soil Using Modified Compaction—Standard Method
- AS 2193 Methods for Calibration and Grading of Force Measuring Systems of Testing Machines

**3 APPARATUS.** The following apparatus, complying with the relevant provisions of AS 1141.2, is required:

- (a) Balance—of at least 6000 g capacity, accurate and readable to 1 g within the operating range.
- (b) Base—a flat rigid foundation on which to compact the specimen, e.g., a concrete floor or cubical concrete block of at least 100 kg mass.
- (c) Containers—airtight containers suitable for storing moistened test samples.
- (d) Datum bar—a metal bar approximately 500 mm × 20 mm × 10 mm dimensions. Regardless of the actual width and thickness dimensions, the longitudinal opposite faces of the bar are plane and parallel to within 0.1 mm.
- (e) Dishes—metal dishes, of about 250 mm and 350 mm diameter.
- (f) Equipment for measuring test specimens accurate and readable to 1 mm, e.g. vernier gauge calliper.
- (g) Filter paper—150 mm diameter coarse filter paper (optional).
- (h) Mixing apparatus—mixing bowl, trowel, spatula and metal quartering plates about 400 mm by 125 mm and 200 mm by 125 mm.
- (j) Mould—three sets of cube moulds complete with plungers, guide moulds, cube mould cramps and a parting tool (see Fig. 1).
- (k) Oven—the mechanically controlled oven with good air circulation, and capable of maintaining a temperature within the range 105°C to 110°C.
- (l) Rammer—a metal rammer with a 50 mm diameter face and drop mass of 4.9 kg, equipped with a suitable device to control the height of drop to a free fall of 450 mm in accordance with AS 1289.E2.1.
- (m) Sample dividers (riffle boxes)—of appropriate size openings (optional).
- (n) Sieves—19.0 mm and 4.75 mm.
- (o) Testing machine—compression testing machine with a minimum capacity of 25 kN and complying with the requirements for Grade A of AS 2193, having two steel compression platens and spherical seat complying with AS 1012, Part 9.
- (p) Vernier depth gauge—of minimum scale length 200 mm, accurate and readable to 1 mm.

**4 SAMPLING.** Sampling shall be carried out in accordance with AS 1141.3.

\* In course of revision and to be retitled as follows:  
 —AS 1141.2, Basic Testing Equipment.