Australian Standard™

AS 1141.20.2

Methods for sampling and testing aggregates

Method 20.2: Average least dimension—Direct measurement (nominal sizes 5 mm and 7 mm)

1 SCOPE

This Standard sets out the counting method for determining the average least dimension of aggregate particles by the use of a slotted gauge. The method is applicable to aggregates of nominal sizes 5 mm and 7 mm for sprayed bituminous surfacing.

NOTE: The first use of the term 'average least dimension' is attributed to E.M. Harrison, MM, in the paper 'Bituminous Surface Treatment of Rural Highways' published by the New Zealand Society of Civil Engineers (Incorporated in 1935).

Present practice is outlined in the AUSTROADS publication (AP 2/90) *Design of sprayed seals*, 1990.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

1141 Methods for sampling and testing aggregates
1141.2 Method 2: Basic testing equipment
1141.11 Method 11: Particle size distribution by sieving

3 APPARATUS

The following apparatus, complying with the relevant provisions of AS 1141.2, is required:

(a) A metal slotted gauge having slots of 2 mm, 3 mm, 4 mm, 5 mm, 6 mm, 7 mm, 8 mm and 9 mm in height arranged consecutively in a suitable frame (see Figure 1). The tolerance for all sized slots shall be ±0.05 mm.

(b) Quartering equipment or riffle box.

(c) Containers that are metal dishes of sufficient size to contain the various portions of the test sample during testing.

(d) A vibrating table (optional) with a motor capable of operating at 50 cycles per second (50 Hz).

4 PREPARATION OF TEST PORTION

The test portion shall be prepared in the following manner:

(a) Sieve the sample as outlined in AS 1141.11.

(b) Combine material retained on the 6.70 mm, 4.75 mm and 2.36 mm sieves and reduce the size of this sample by quartering or riffling to obtain the test portion of at least 100 particles.