Australian Standard®

Methods for sampling and testing aggregates

Method 21: Aggregate crushing value

This Standard incorporates Amendment No. 1 (September 2020). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

1 SCOPE This Standard sets out the method for determining the crushing value of coarse aggregate.

The test is performed on dry material and is carried out in duplicate. The standard aggregate size for testing is −13.2 mm, +9.50 mm. Provision is made for testing other size fractions (see Clause 8).

NOTE: The results obtained for other size fractions may not be the same as for the standard fraction.

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

AS

1141 Methods for sampling and testing aggregates

A1 1141.1 Part 1: Definitions

1141.2 Method 2: Basic testing equipment

A1 **[Text deleted]**

2193 Methods for calibration and grading of force-measuring systems of testing machines

3 DEFINITIONS For the purpose of this Standard the definitions in AS 1141.1 apply.

A1 **4 APPARATUS** Apparatus conforming to the relevant provisions of AS 1141.2 and the following shall be used:

(a) *Balance* — a balance of adequate capacity, with a limit of performance not exceeding ±5 g.

(b) *Cylinder* — an opened-ended steel cylinder with a tapered plunger and a baseplate for use in the crushing value tests on coarse aggregates. The form and dimensions of three sizes of cylinder, plunger and baseplate are given in Figure 1. The surface in contact with the aggregate shall be machined to a reasonably smooth finish and shall have a surface hardness of not less than Rockwell C50.

(c) *Measure* — a cylindrical metal measure, of sufficient rigidity to retain its form under rough usage. The standard measure shall have an internal diameter of 115 ±5 mm and an internal height of 180 ±5 mm. The small measure shall have an internal diameter of 60 ±3 mm and an internal height of 90 ±3 mm.

(d) *Oven* — thermostatically controlled oven, to operate at temperature of 105 to 110°C.

A1 (e) *Sieves* — test sieves as required (see Table 1).