

Australian Standard[®]

Methods for sampling and testing aggregates

Method 22: Wet/dry strength variation

1 SCOPE This Standard sets out the method for determination of the variation in strength of aggregate tested in both the oven dry and saturated surface dry condition.

NOTE: This test may be performed on a range of size fractions, and on crushed spalls or crushed drill core.

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

AS

1141 Methods for sampling and testing aggregates

1141.1 Method 1: Definitions

1141.2 Method 2: Basic testing equipment

1152 Specification for test sieves

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

3 DEFINITION For the purpose of this Standard, the definitions in AS 1141.1 and that below apply.

3.1 Strength—the crushing force which, when applied to a known mass of coarse aggregate, will produce fines amounting to 10 percent of the dry mass of a test portion.

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

- (a) *Absorbent cloth or towelling.*
- (b) *Balance*—balances of adequate capacity, with a limit of performance not exceeding ± 5 g for mass determinations greater than 2 kg and ± 0.5 g for mass determinations 2 kg or less.
- (c) *Container*—a non-perforated container of sufficient size to contain the test portion during soaking.
- (d) *Cylinder*—an open-ended steel cylinder with a tapered plunger and baseplate. The form and dimensions of two 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.
- (e) *Desiccator*—or sealed containers with a desiccant for storing dry test portions.
- (f) *Dishes*—appropriately sized metal dishes or trays for test portions.
- (g) *Mallet*—rubber mallet with face about 70 mm diameter, mass 800 ± 100 g and handle length about 300 mm.