

## Australian/New Zealand Standard™

**Masonry units, segmental pavers and flags—  
Methods of test****Method 17: Determining initial rate of absorption  
(suction)**

*This Standard incorporates Amendment No. 1 (August 2004). 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 initial rate of absorption (suction) of masonry units.

## NOTES:

- 1 The initial rate of absorption (IRA) is the amount of water absorbed in 1 min through the bed face of the unit. It is a measure of the 'suction' of the unit, and in experienced hands is an important factor in the design of mortars that will bond strongly with the units. It is not an absolute measure of bond strength; the significance of the actual figures varies widely with such factors as the type of unit and the materials and methods of manufacture.
- 2 This method might not be practicable for large units.

**2 REFERENCED DOCUMENTS**

The following documents are referred to in this Standard:

## AS/NZS

4456	Masonry units, segmental pavers and flags—Methods of test
4456.0	Part 0: General introduction and list of methods
4456.1	Method 1: Sampling for testing
4456.2	Method 2: Assessment of mean and standard deviation

**3 PRINCIPLE**

A masonry unit is oven-dried, then cooled and placed with its bed face in contact with water for a short period. From the increase in weight from water absorption, the initial rate of absorption is calculated.

**4 APPARATUS**

The following is required:

- (a) A well-ventilated drying oven with a cubic capacity not less than 3 times the total volume of the specimens being dried, and capable of maintaining a temperature of  $110 \pm 8^\circ\text{C}$ .
- (b) A water tank or tray representing an area of water of not less than  $0.25 \text{ m}^2$  and containing two bars of corrosion-resistant material not more than 6 mm in width and arranged to support the bed face of test specimens parallel to and 3 mm beneath the water surface (see Figure 1).