

# Australian Standard<sup>®</sup>

AS 1012.4.2:2014

## Methods of testing concrete

### Method 4.2: Determination of air content of freshly mixed concrete—Measuring reduction in air pressure in chamber above concrete

#### 1 SCOPE

This Standard sets out the method for determining the air content of freshly mixed concrete from observations of the reduction in air pressure in a chamber above the concrete when the concrete is exposed to the air pressure (see Note 1). When performed for quality control purposes such as for plant production testing or for mixer uniformity tests, the apparent air content only may be sufficient. The air content shall be determined when specified.

The results obtained are dependent on the compaction method used. This Standard provides for compaction of the sample by rodding or by vibration or by using self compacting concrete (SCC) placed in the bowl.

#### NOTES:

- 1 This Standard is intended for use with concretes made with relatively dense natural aggregates for which the aggregate correction factor can be determined satisfactorily by the technique described in Clause 9. It is not recommended for use with concretes made with lightweight aggregates, or aggregates of high porosity (see AS 1012.4.3).
- 2 This Standard may involve hazardous materials, operations, and equipment. The Standard does not purport to address all of the safety problems associated with its use. The user of this Standard should establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

#### 2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

#### AS

- |          |   |
|----------|---|
| 1012     | Methods of testing concrete   |
| 1012.1   | Method 1: Sampling of fresh concrete  |
| 1012.2   | Method 2: Preparation of concrete mixes in the laboratory   |
| 1012.4.1 | Method 4.1: Determination of air content of freshly mixed concrete—Measuring reduction in concrete volume with increased air pressure |
| 1012.4.3 | Method 4.3: Determination of air content of freshly mixed concrete—Measuring air volume when concrete is dispersed in water           |