Australian Standard™

# 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.

NOTES:

1 This method 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 The results obtained will be dependent on the compaction method used.

3 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.

4 Data on the precision of the test method were not available at the time of publication. This information will be included when available.

## 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

## 3 PRINCIPLE

The air content of freshly mixed concrete is measured by the reading shown on a pressure gauge calibrated to record the reduction in a predetermined test pressure applied to the concrete. The reduction in pressure is directly related to the air content of the concrete.