

**STANDARDS AUSTRALIA**

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**RECONFIRMATION**

**OF**

**AS 1012.18—1996**

**Methods of testing concrete**

**Method 18: Determination of setting time of fresh concrete, mortar and grout by  
penetration resistance**

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**RECONFIRMATION NOTICE**

Technical Committee BD-042 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 9 September 2014.

The following are represented on Technical Committee BD-042:

**AUSTROADS**

Australian Chamber of Commerce and Industry

Cement Concrete and Aggregates—Concrete

Concrete Institute of Australia

National Association of Testing Authorities Australia

The University of New South Wales

University of Technology Sydney

Victorian Construction Materials Laboratory

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## NOTES

# Australian Standard®

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## Methods of testing concrete

### Method 18: Determination of setting time of fresh concrete, mortar and grout by penetration resistance

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#### PREFACE

This Standard was prepared by the Standards Australia Committee BD/42 on Methods of Testing Concrete to supersede AS 1012.18—1975. This method is one of a series in metric units applying to the sampling and testing of concrete. This series is being revised and extended with the objective of bringing it into line with current practice.

In the course of preparing this Standard, the Committee has taken into account Australia's experience in using existing methods, and has given consideration to the method set out in ASTM C403—95, *Test Method for Time of Setting of Concrete Mixtures by Penetration Resistance*. Acknowledgment is made of the assistance received from this source.

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#### METHOD

**1 SCOPE** This Standard describes the procedures for determining the initial and final setting times of mortar sieved from fresh concrete mix, the slump of which is greater than zero, using penetration resistance needles. This method is also applicable to fresh mortar and grout.

##### NOTES:

- 1 As the hardening of concrete is a gradual process, any definition of setting time must necessarily be arbitrary.
- 2 This method is primarily intended to be used as a means for comparing setting times under the same conditions in the laboratory.
- 3 This method may be used to determine the setting characteristics at a standard temperature ( $23 \pm 2^\circ\text{C}$ ), at some other specified temperature or alternatively to determine the setting time-temperature relationship.
- 4 This method may be used to estimate setting times of specific concretes, mortars or grouts in the field.

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

##### AS

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|--------|--|
| 1012   | Methods of testing concrete  |
| 1012.1 | Part 1: Sampling of fresh concrete   |
| 1012.2 | Part 2: Preparation of concrete mixes in the laboratory                                    |
| 1012.3 | Part 3: Methods for the determination of properties related to the consistence of concrete |