Australian Standard®

Methods of testing concrete

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

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.

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 ±2°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
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