Australian Standard®

Methods of testing concrete

Method 3.5: Determination of properties related to the consistency of concrete—Slump flow, T_{500} and J-ring test

1 SCOPE

This Standard sets out the method for determining the slump flow of self compacting concrete (SCC) with a measurable diameter of spread of the flowing concrete in excess of 500 mm when the nominal size of aggregate does not exceed 20 mm. The Standard also sets out the method of determining the time it takes for the slumping and flowing SCC to reach a diameter of 500 mm (T_{500} time). It sets out the measurement of the J-ring passing ability and the assessment of the stability and resistance to segregation of SCC.

NOTE: This Standard may involve hazardous materials, operations, and equipment. This Standard does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this Standard to 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 concrete
1012.2 Method 2: Preparing concrete mixes in the laboratory

3 DEFINITIONS

For the purpose of this Standard the definitions below apply.

3.1 J-ring passing ability

The passing ability of SCC.

3.2 Self compacting concrete (SCC)

Concrete that is able to flow and consolidate under its own weight, completely fill the formwork or bore hole even in the presence of dense reinforcement, whilst maintaining homogeneity and without the need for additional compaction. SCC is also known as 'self-consolidating concrete' and 'super-workable concrete'.

3.3 Slump flow

The horizontal flow of the concrete that occurs, when the slump cone is lifted.

3.4 T_{500} time

The time (in seconds) that it takes for the outer edge of the flowing concrete to reach an average diameter of 500 mm.

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