Australian Standard®

Methods of testing concrete

Method 16: Determination of creep of concrete cylinders in compression

PREFACE

This Standard was prepared by the Standards Australia Committee BD/42 on Methods of Testing Concrete to supersede AS 1012.16—1974. This method is one of a series in metric units for testing of concrete applying to the sampling and testing of concrete. The objective of the revision is to extend the series and bring it into line with current practice.

METHOD

1 SCOPE This Standard describes the procedure for determining the creep of standard concrete test cylinders subjected to a sustained longitudinal compressive load. This method does not provide means for calculating time-dependent deflection of reinforced or prestressed concrete members.

NOTE: The conditions for curing and storage (see Clause 6) can be varied to suit different requirements, e.g. early pre-stress. The time of loading (see Clause 7) can also be varied to give an indication of other properties. These variations, however, will not comply with the requirements for a creep test as specified in this Standard.

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

AS	
1012	Methods of testing concrete
1012.8	Part 8: Method for making and curing concrete compression, indirect tensile and flexure test specimens, in the laboratory or in the field
1012.9	Part 9: Method for the determination of the compressive strength of concrete specimens
1012.13	Part 13: Determination of the drying shrinkage of concrete for samples prepared in the field or in the laboratory
ASTM	
E 177	Practice for Use of the Terms Precision and Bias in ASTM Test Methods

3 PRINCIPLE The creep of the concrete is obtained by determining the total combined creep and drying shrinkage of the loaded specimens and subtracting from this value the drying shrinkage of the unloaded specimens, all specimens being stored in the same environmental conditions. This Standard details the fixed environmental conditions to carry out the test, which allows a comparison of creep from one concrete to another, thus minimizing the effect of variable conditions on the results of concrete tests.