

# Methods of testing cement —

## Part 3: Determination of setting time and soundness

The European Standard EN 196-3:1994 has the status of a  
British Standard

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This British Standard, having been prepared under the direction of the Technical Committee B/516, was published under the authority of the Standards Board and comes into effect on 15 March 1995

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The following BSI references relate to the work on this standard:  
Committee reference B/516  
Special announcement in *BSI News* December 1992

ISBN 0 580 21519 9

## Amendments issued since publication

| Amd. No. | Date | Comments |
|----------|------|----------|
|          |      |          |
|          |      |          |
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## National foreword

This British Standard has been prepared under the direction of Technical Committee B/516, Cement and lime. It is the English language version of EN 196-3:1994 *Methods of testing cement — Part 3: Determination of setting time and soundness* published by the European Committee for Standardization (CEN). EN 196-3 was drawn up by CEN Technical Committee 51, Cement and building limes, as Part 3 of a series on testing cement which was originally accepted by CEN on 15 November 1985 and made available on 12 May 1987. The UK gave a negative vote at the final voting stage and, under the CEN Rules then in force, was not obliged to implement this Part. A second formal vote was taken in November 1992 when the UK again gave a negative vote but, under the CEN Rules now in force, is obliged to implement this Part. This British Standard supersedes BS 4550-3.5:1978, BS 4550-3.6:1978 and BS 4550-3.7:1978 which are withdrawn.

The methods described in this standard retain the use of the familiar Vicat and le Chatelier apparatus. The UK negative votes on this Part were due to the fact that the draft European Standard contained certain errors, some of which remain in the 1994 text, e.g. the minimum laboratory relative humidity in 4.1 should be 50 % to accord with EN 196-1. Furthermore, the requirement in 7.1.3 for a minimum relative humidity of 98 % is inappropriate as values at this level can neither be measured nor controlled with any precision. The lengths of the standard consistence plunger and of the setting time needles are not critical where the Vicat apparatus is calibrated in advance of the test (see 5.2.3 and 6.2). However, for convenience in use, they should be of the same length within  $\pm 1$  mm. Hence, in the typical illustrations shown in Figure 1, the needle lengths in (d) and (e) should be shown to the upper shoulder of the cone.

The Vicat mould is specified in 5.1 to be of hard rubber but “moulds of metal may be used provided that .... they can be shown to give the same test results”. Such data are available in the UK enabling metal moulds to be used.

In the test for standard consistence, 5.2.3 requires repeat tests “with pastes containing different water contents until one is found to produce a distance between plunger and base-plate of  $(6 \pm 1)$  mm”. The UK procedure for meeting this requirement is given in national annex NA.

BS 4550-3.7:1978 included a soundness test for supersulfated cement, based on immersion in cold water, which does not appear in EN 196-3. This procedure is being retained in an appendix to BS 4248:1974.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

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### Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the EN title page, pages 2 to 8, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

## Methods of testing cement — Part 3: Determination of setting time and soundness

Méthodes d'essai des ciments —  
Partie 3: Détermination du temps de prise et  
de la stabilité

Prüfverfahren für Zement —  
Teil 3: Bestimmung der Erstarrungszeiten und  
der Raumbeständigkeit

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