
**Cement — Test methods —
Determination of setting time and
soundness**

*Ciments — Méthodes d'essais — Détermination du temps de prise et
de la stabilité*



Reference number
ISO 9597:2008(E)

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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 9597 was prepared by Technical Committee ISO/TC 74, *Cement and lime*.

This second edition cancels and replaces the first edition (ISO 9597:1989), the following clauses and subclauses of which have been technically revised, based on comments received by the secretariat.

- 4.1: Requirement for the laboratory relative humidity is reduced to a minimum of 50 % from a minimum of 65 %.
- 4.2.5: Drinking water is permitted for storing and boiling test specimens; drinking water is no longer permitted in the production of paste since such water varies in quality between places and even with time in the same laboratory.
- 5.1: The Vicat mould is permitted to have a cylindrical, in addition to truncated conical, shape.
- 5.2.1: The time permitted for scraping paste from the sides and bottom of the mixing bowl is increased from 15 s to 30 s.
- 5.2.3: The end-point for the determination of standard consistence is increased to (6 ± 2) mm from (6 ± 1) mm.
- Clause 6: The determination of the setting time is carried out whilst the specimen is immersed in water.
- 6.1.1: In the determination of the setting time, the use of automatic apparatus conforming to the requirements of the reference method is permitted.
- 6.1.3: In the determination of the setting time, the tolerance on storage temperature for specimens is reduced to $(20,0 \pm 1,0)$ °C from (20 ± 1) °C.
- 6.2.2: The end-point for the determination of the initial setting time is increased to (6 ± 3) mm from (4 ± 1) mm.
- 6.3.1: It is required to confirm the end-point for the determination of the final setting time by testing at two additional positions in the test specimen.
- 7.1.1: The material for the construction of the Le Chatelier apparatus to determine the soundness is extended to any non-corrodible spring metal.

- 7.1.3: The minimum relative humidity in which specimens for determination of soundness are stored is reduced to 90 % from 98 %.
- 7.2: The determination of soundness is carried out once.
- 7.4: Where a retest of the determination of soundness is required, the relative humidity at which the cement sample is stored is reduced to 50 % from 65 %.
- Annex A: An alternative method for testing the setting times of slow-setting cements is included.

