ICS 91.100.10 SLOVENSKÁ TECHNICKÁ NORMA Marec 2025

STN	**Metódy skúšania cementu Časť 12: Reaktivita zložiek cementu Metódy stanovenia hydratačného tepla a obsahu viazanej vody**	**STN EN 196-12** 72 2100

Methods of testing cement - Part 12: Reactivity of cement constituents - Heat of hydration and bound water content methods

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 02/25

Obsahuje: EN 196-12:2024

140092

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 196-12

December 2024

ICS 91.100.10

English Version

Methods of testing cement - Part 12: Reactivity of cement constituents - Heat of hydration and bound water content methods

Méthodes d'essais des ciments - Partie 12 : Réactivité des constituants du ciment - Méthodes de détermination de la chaleur d'hydratation et de la teneur en eau liée

Prüfverfahren für Zement - Teil 12: Reaktivität von Zementbestandteilen - Verfahren zur Bestimmung der Hydratationswärme und des chemisch gebundenen Wassers

This European Standard was approved by CEN on 12 August 2024.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Ref. No. EN 196-12:2024 E

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European foreword

This document (EN 196-12:2024) has been prepared by Technical Committee CEN/TC 51 “Cement and Building Limes”, the secretariat of which is held by NBN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2025, and conflicting national standards shall be withdrawn at the latest by June 2025.

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1 Scope

This document specifies two equivalent test methods to assess the chemical reactivity of a pozzolanic or latent hydraulic cement constituent or concrete addition by measurements of heat of hydration (see Clause 5 and 8.3 Method A, Heat of Hydration) or bound water content (see Clause 5 and 8.4 Method B, Bound Water Content) of hydrated pastes composed of the cement constituent or concrete addition, calcium hydroxide, calcium carbonate, potassium sulfate, and potassium hydroxide cured at 40 °C for 72 h and 168 h (3 days and 7 days).

These two test methods measure chemical reactivity of test specimens intended for use as cementitious materials, such as cement constituents and concrete additions. The test methods do not distinguish between latent hydraulic and pozzolanic reactivity.

The test methods are used for qualification purposes if the cement constituents or concrete additions are tested at the fineness as specified by the respective product standards. In the absence of a product standard or a specification in the product standard, the constituents are tested at the fineness of the intended use.

NOTE In case the test methods are used for purposes of comparison of intrinsic reactivity, cement constituents are tested at similar fineness, where possible.

The test methods are also used for testing other new constituents that are latent hydraulic or pozzolanic and that are not covered by EN 197 series product standards. However, for such new constituents the validity of the underlying correlations with strength development have not been verified; in consequence the test results can only be used for informative and indicative purposes.

Furthermore, these test methods are used in manufacturing control of cement constituents for assessing their latent hydraulic or pozzolanic reactivity.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 196-2, *Method of testing cement — Part 2: Chemical analysis of cement*

EN 196-6, *Methods of testing cement — Part 6: Determination of fineness*

EN 196-11, *Methods of testing cement — Part 11: Heat of hydration — Isothermal Conduction Calorimetry method*

EN 197-1, *Cement — Part 1: Composition, specifications and conformity criteria for common cements*

EN 197-6, *Cement — Part 6: Cement with recycled building materials*

ISO 3310-1:2016, *Test sieves — Technical requirements and testing — Part 1: Test sieves of metal wire cloth*

ISO 9277, *Determination of the specific surface area of solids by gas adsorption — BET method*