



SLOVENSKI STANDARD
oSIST prEN 12390-4:2024
01-januar-2024

Preskušanje strjenega betona - 4. del: Tlačna trdnost - Specifikacija za stiskalnice

Testing hardened concrete - Part 4: Compressive strength - Specification for testing machines

Prüfung von Festbeton - Teil 4: Bestimmung der Druckfestigkeit - Anforderungen an Prüfmaschinen

Essais pour béton durci - Partie 4 : Résistance à la compression - Caractéristiques des machines d'essai

Ta slovenski standard je istoveten z: prEN 12390-4

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ICS:

91.100.30 Beton in betonski izdelki Concrete and concrete products

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EUROPEAN STANDARD
NORME EUROPÉENNE
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ICS 91.100.30

Will supersede EN 12390-4:2019

English Version

Testing hardened concrete - Part 4: Compressive strength - Specification for testing machines

Essais pour béton durci - Partie 4 : Résistance à la
compression - Caractéristiques des machines d'essai

Prüfung von Festbeton - Teil 4: Bestimmung der
Druckfestigkeit - Anforderungen an Prüfmaschinen

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 104.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

This draft European Standard was established by CEN in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (prEN 12390-4:2023) has been prepared by Technical Committee CEN/TC 104 “Concrete and related products”, the secretariat of which is held by SN.

This document will supersede EN 12390-4:2019.

This standard is one of a series on testing concrete.

EN 12390, *Testing hardened concrete*, consists of the following parts:

- *Part 1: Shape, dimensions and other requirements for specimens and moulds;*
- *Part 2: Making and curing specimens for strength tests;*
- *Part 3: Compressive strength of test specimens;*
- *Part 4: Compressive strength – Specification for testing machines;*
- *Part 5: Flexural strength of test specimens;*
- *Part 6: Tensile splitting strength of test specimens;*
- *Part 7: Density of hardened concrete;*
- *Part 8: Depth of penetration of water under pressure;*
- *Part 10: Determination of the carbonation resistance of concrete at atmospheric levels of carbon dioxide;*
- *Part 11: Determination of the chloride resistance of concrete, unidirectional diffusion;*
- *Part 12: Determination of the potential carbonation resistance of concrete: Accelerated carbonation method (in preparation);*
- *Part 13: Determination of secant modulus of elasticity in compression;*
- *Part 14: Semi-adiabatic method for the determination of heat released by concrete during its hardening process;*
- *Part 15: Adiabatic method for the determination of heat released by concrete during its hardening process;*
- *Part 16: Determination of the shrinkage of concrete;*
- *Part 17: Determination of creep of concrete in compression.*

prEN 12390-4:2023 contains the following significant changes with respect to EN 12390-4:2019:

- Reference to compliance with EN ISO 7500-1
- insertion of Table 2 of EN ISO 7500-1
- creation of two classes of machines

prEN 12390-4:2023 (E)**Introduction**

The requirements for testing machines set out in this document have been formulated to satisfy the needs of those compressive tests on concrete specimens which are specified in EN 206:2013+A2:2021. Machines conforming to this standard can be suitable for other uses, but this needs to be carefully considered on an individual test basis. Particular care needs to be taken before using machines conforming to this document for compressive tests on small specimens, e.g. those with lateral dimensions significantly less than 100 mm. The main concern is that the ball-seating fitted to the upper platen can be too large to align satisfactorily on the top of such small specimens and special adaptations can be required. Another concern is the ability to accurately determine the failure load of small or low strength specimens.

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