Irish Standard
I.S. EN 12390-8:2019

Testing hardened concrete - Part 8: Depth of penetration of water under pressure

I.S. EN 12390-8:2019

Incorporating amendments/corrigenda/National Annexes issued since publication:

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NSAI	T +353 1 807 3800	Sales:
1 Swift Square,	F +353 1 807 3838	T +353 1 857 6730
Northwood, Santry	E standards@nsai.ie	F +353 1 857 6729
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National Foreword

I.S. EN 12390-8:2019 is the adopted Irish version of the European Document EN 12390-8:2019, Testing hardened concrete - Part 8: Depth of penetration of water under pressure

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 12390-8

June 2019

ICS 91.100.30

Supersedes EN 12390-8:2009

English Version

Testing hardened concrete - Part 8: Depth of penetration of water under pressure

Essais pour béton durci - Partie 8 : Profondeur de pénétration d'eau sous pression

Prüfung von Festbeton - Teil 8: Wassereindringtiefe unter Druck

This European Standard was approved by CEN on 29 April 2019.

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This European Standard exists 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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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 12390-8:2019) has been prepared by Technical Committee CEN/TC 104 "Concrete and related products", the secretariat of which is held by SN.

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of an identical text or by endorsement, at the latest by December 2019, and conflicting national standards shall be withdrawn at the latest by December 2019.

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

This document supersedes EN 12390-8:2009.

The standard has been restricted to tests on specimens cured in water.

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 of 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 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 (in preparation);*

— *Part 17: Determination of creep of concrete in compression (in preparation);*

— *Part 18: Determination of the chloride migration coefficient (in preparation).*

This edition includes the following significant technical changes with respect to EN 12390 8:2009:

— editorial revision.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This document specifies a method for determining the depth of penetration of water under pressure in hardened concrete which has been water cured.

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 12390-2, *Testing hardened concrete — Part 2: Making and curing specimens for strength tests*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

4 Principle

Water is applied under pressure to the surface of hardened concrete. The specimen is then split and the depth of penetration of the waterfront is measured.

5 Apparatus

The test specimen, of given dimensions, shall be placed in any suitable equipment in such a manner that the water pressure can act on the test area and the pressure applied can be continuously indicated. An example of a test arrangement is shown in Figure 1.

It is preferable that the apparatus should allow the other surfaces of the test specimen to be observed.

The water pressure may be applied to the surface of the test specimen either from the bottom, or the top. A watertight seal shall be provided, made of rubber or other similar material.

The dimensions of a test area shall be approximately half of the length of the edge or diameter of the test surface.