



NSAI
Standards

Irish Standard
I.S. EN 12697-40:2020

Bituminous mixtures - Test methods - Part 40: In situ drainability

I.S. EN 12697-40:2020

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on:

EN 12697-40:2020

Published:

2020-02-26

*This document was published
under the authority of the NSAI
and comes into effect on:*

2020-03-15

ICS number:

93.080.20

NOTE: If blank see CEN/CENELEC cover page

NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

National Foreword

I.S. EN 12697-40:2020 is the adopted Irish version of the European Document EN 12697-40:2020, Bituminous mixtures - Test methods - Part 40: In situ drainability

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

For relationships with other publications refer to the NSAI web store.

Compliance with this document does not of itself confer immunity from legal obligations.

In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

This page is intentionally left blank

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 12697-40

February 2020

ICS 93.080.20

English Version

**Bituminous mixtures - Test methods - Part 40: In situ
drainability**

Mélanges bitumineux - Méthodes d'essai - Partie 40 :
Perméabilité en place

Asphalt - Prüfverfahren - Teil 40: In-situ-
Durchlässigkeit

This European Standard was approved by CEN on 18 November 2019.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

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.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

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

Contents	Page
European foreword.....	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	4
4 Principle	5
5 Apparatus.....	5
5.1 Permeameter	5
5.2 Standing board	7
5.3 Stopwatch.....	7
5.4 Thermometer	7
5.5 Water	7
6 Procedure.....	7
6.1 Calibration	7
6.2 Locations	7
6.3 Measurement at each location	8
7 Calculation	8
8 Report.....	9
9 Precision.....	9
Annex A (normative) Apparatus calibration.....	10
A.1 Application	10
A.2 Volume calibration	10
A.3 Series resistance time, r	10
A.4 Parallel leakage time	10
Bibliography.....	12

European foreword

This document (EN 12697-40:2020) has been prepared by Technical Committee CEN/TC 227 “Road materials”, the secretariat of which is held by BSI.

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 August 2020, and conflicting national standards shall be withdrawn at the latest by August 2020.

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 12697-40:2012.

The following is a list of significant technical changes since the previous edition:

- the title no longer makes the method exclusively for hot mix asphalt;
- [ge] editorial update according to current standard template;
- [ge] symbol for litre, “L” amended to l;
- [6.3.8] NOTE modified according to ISO/IEC Directives – Part 2:2016, 24.5;
- [Clause 8] Test report: bullet a) completed with ambient temperature.

A list of all parts in the EN 12697 series can be found on the CEN website.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

EN 12697-40:2020 (E)

1 Scope

This document describes a method to determine the *in situ* relative hydraulic conductivity, at specific locations, of a road surfacing that is designed to be permeable. An estimate of the average value for the surfacing is obtained from the mean value of a number of determinations on each section of road.

The test measures the ability to drain water (drainability) achieved *in situ* of a surfacing. As such, it can be used as a compliance check to ensure that a permeable surface course has the required properties when it is laid. The test can also be used subsequently to establish the change of drainage ability with time.

For the test to be valid, the surface of the test area should be clean and free from detritus. Measurements can be made when a road is either wet or dry, but not if it is in a frozen state.

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 13036-1, *Road and airfield surface characteristics — Test methods — Part 1: Measurement of pavement surface macrotexture depth using a volumetric patch technique*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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 <https://www.iso.org/obp/ui>

3.1

outflow time

time (s) that elapses for an outflow of 4,0 l through the permeameter, between the meniscus at the 5 l mark and when it falls to the 1 l mark

3.2

series resistance time

r

outflow time (s) that is determined when the permeameter is located so the outlet is clear of any surfacing that could impede the exit of out-flowing water

Note 1 to entry: The method for calculating the series resistance time is given in Annex A.

Note 2 to entry: The series resistance time is subtracted from measurements of outflow time when the permeameter is used on a surfacing of a pavement.

3.3

parallel leakage time

outflow time when the outlet is restricted by an impermeable surface

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- Looking for additional Standards? Visit Intertek Inform Infostore
 - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-