NSAI Standards

Irish Standard
I.S. EN 12697-34:2020

Bituminous mixtures - Test methods - Part 34: Marshall test

I.S. EN 12697-34:2020

Incorporating amendments/corrigenda/National Annexes issued since publication:

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National Foreword

I.S. EN 12697-34:2020 is the adopted Irish version of the European Document EN 12697-34:2020, Bituminous mixtures - Test methods - Part 34: Marshall test

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 12697-34

February 2020

ICS 93.080.20

Supersedes EN 12697-34:2012

English Version

Bituminous mixtures - Test methods - Part 34: Marshall test

Mélanges bitumineux - Méthodes d'essai - Partie 34 : Essai Marshall

Asphalt - Prüfverfahren - Teil 34: Marshall-Prüfung

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

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

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Contents

Page

European foreword

This document (EN 12697-34:2020) 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of an identical text or by endorsement, at the latest by August 2020, and conflicting national standards shall be withdrawn at the latest by August 2020.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 12697-34:2012.

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;

— [Clause 2] titles for test methods EN 12697-series adjusted, reference EN ISO 7500-1:2018, Metallic materials — Verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Verification and calibration of the force-measuring system (ISO 7500 1:2018) replaced by: EN ISO 7500-1:2018, Metallic materials — Calibration and verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Calibration and verification of the force-measuring system (ISO 7500-1:2018);

— [6.1.1 and 6.2.4] NOTEs modified according to ISO/IEC Directives – Part 2:2016, 24.5;

— [7.1] correction of Formula (1). Factor *v* realigned as exponent;

— [Bibliography] EN 12697-35 deleted. Referred to in Clause 2 Normative references.

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.

1 Scope

This document specifies a test method for determining the stability, flow and the Marshall quotient values of specimens of bituminous mixtures mixed according to EN 12697-35 and prepared using the impact compactor method of test EN 12697-30. It is limited to dense graded asphalt concrete and hot rolled asphalt.

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 12697-6, *Bituminous mixtures — Test methods — Part 6: Determination of bulk density of bituminous specimens*

EN 12697-29, *Bituminous mixtures — Test method — Part 29: Determination of the dimensions of a bituminous specimen*

EN 12697-30, *Bituminous mixtures — Test methods — Part 30: Specimen preparation by impact compactor*

EN 12697-35, *Bituminous mixtures — Test methods — Part 35: Laboratory mixing*

EN ISO 7500-1:2018, *Metallic materials — Calibration and verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Calibration and verification of the force-measuring system (ISO 7500-1:2018)*

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
stability
S
maximum load, in kilonewtons (kN), of a moulded asphalt specimen

3.2
flow
F
deformation of the moulded specimen in millimetres (mm) at maximum load less the nominal deformation obtained by extrapolation of the tangent of the graph of load against deformation back to zero load (A to M' in Figure A.1)

3.3
tangential flow
F_t
nominal deformation of the moulded specimen, in millimetres (mm) obtained by extrapolation of the tangent of the graph of load against deformation forward to the stability load less the nominal deformation obtained by extrapolation of the tangent back to zero load (A to B' in Figure A.1)