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NSAI Standards

Irish Standard
I.S. EN 12697-10:2017

Bituminous mixtures - Test methods - Part 10: Compactability

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I.S. EN 12697-10:2017

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National Foreword

I.S. EN 12697-10:2017 is the adopted Irish version of the European Document EN 12697-10:2017, Bituminous mixtures - Test methods - Part 10: Compactability

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 12697-10

December 2017

ICS 93.080.20

Supersedes EN 12697-10:2001

English Version

Bituminous mixtures - Test methods - Part 10: Compactability

Mélanges bitumineux - Méthodes d'essai pour mélange hydrocarboné à chaud - Partie 10 : Compactabilité

Asphalt - Prüfverfahren für Heißasphalt - Teil 10: Verdichtbarkeit

This European Standard was approved by CEN on 21 August 2017.

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European foreword

This document (EN 12697-10:2017) has been prepared by Technical Committee CEN/TC 227 “Road materials”, the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by June 2018, and conflicting national standards shall be withdrawn at the latest by June 2018.

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 12697-10:2001.

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

— the series title no longer makes the method exclusively for hot mix asphalt;

— Terms and definitions deleted, [3.1] to [3.10];

— definition of compactability and compaction resistance have been added, [3.1]and [3.2];

— [6.2] 2nd paragraph. "At least three tests shall be carried out on each mixture"; amended to: "At least three specimens shall be compacted on each mixture";

— more detailed explanation of regression analysis for impact compaction method [7.1.2];

— change of regression procedure for impact compaction procedure by considering only thickness measurements between impact 30 and 200 in reduce effect of manual mould filling [Figure 2];

— “force” added in Clause 8, List Entry e).

The applicability of this European Standard is described in the product standards for bituminous materials.

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 organizations 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.

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1 Scope

This European Standard describes three test methods for characterizing the compactability of a bituminous mix, by the relation between its density or void content and the compaction energy applied to it, using an impact (Marshall) compactor, gyratory compactor, or a vibratory compactor.

This European Standard applies to bituminous mixtures, both those prepared in laboratory and those resulting sampled from plant produced mixtures. The results of the test method serve to supplement the results of mixture design.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 12697-5, *Bituminous mixtures — Test methods for hot mix asphalt — Part 5: Determination of the maximum density*

EN 12697-6, *Bituminous mixtures — Test methods for hot mix asphalt — Part 6: Determination of bulk density of bituminous specimens*

EN 12697-8, *Bituminous mixtures — Test methods for hot mix asphalt — Part 8: Determination of void characteristics of bituminous specimens*

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

EN 12697-31, *Bituminous mixtures — Test methods for hot mix asphalt — Part 31: Specimen preparation by gyratory compactor*

EN 12697-32, *Bituminous mixtures — Test methods for hot mix asphalt — Part 32: Laboratory compaction of bituminous mixtures by vibratory compactor*

3 Terms and definitions

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

3.1
compactability
K, *k*
ability of an asphalt mixture to be compacted (*K* when evaluated by gyratory compaction and *k* when evaluated by vibratory compaction)

Note 1 to entry: High values of *K* and *k* will indicate a mixture for which less compaction energy is required to obtain a given void content decrease.

3.2
compaction resistance
C, *T*
resistance of an asphalt mixture to being compacted (*C* when evaluated by impact compaction of several specimens with varied compaction energy and *T* when evaluated by impact compaction of one specimen while measuring its thickness)

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