

Bituminous mixtures - Test methods - Part 26: Stiffness

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English Version

Bituminous mixtures - Test methods - Part 26: Stiffness

Mélanges bitumineux - Méthodes d'essai - Partie 26:
Module de rigidité

Asphalt - Prüfverfahren - Teil 26: Steifigkeit

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EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN 12697-26:2018) 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of an identical text or by endorsement, at the latest by December 2018, and conflicting national standards shall be withdrawn at the latest by December 2018.

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

This document supersedes EN 12697-26:2012.

Compared with EN 12697-26:2012, the following changes have been made:

- the series title no longer makes the method exclusively for hot mix asphalt [Title];
- implementation of a real haversinusoidal load in Annex C;
- implementation of several technical corrections in all annexes;
- adjustment of procedures in all the tests;
- application of the correct wording within all the test procedures.

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.

1 Scope

This European Standard specifies the methods for characterizing the stiffness of bituminous mixtures by alternative tests, including bending tests and direct and indirect tensile tests. The tests are performed on compacted bituminous material under a sinusoidal loading or other controlled loading, using different types of specimens and supports.

The procedure is used to rank bituminous mixtures on the basis of stiffness, as a guide to relative performance in the pavement, to obtain data for estimating the structural behaviour in the road and to judge test data according to specifications for bituminous mixtures.

As this standard does not impose a particular type of testing device the precise choice of the test conditions depends on the operating scope and working range of the device used.

For the choice of specific test conditions, the requirements of the product standards for bituminous mixtures should be respected.

The applicability of this document is described in the product standards for bituminous mixtures.

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

EN 12697-7, *Bituminous mixtures — Test methods for hot mix asphalt — Part 7: Determination of bulk density of bituminous specimens by gamma rays*

EN 12697-27, *Bituminous mixtures — Test methods — Part 27: Sampling*

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

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

EN 12697-33, *Bituminous mixtures — Test methods — Part 33: Specimen prepared by roller compactor*

3 Terms, definitions and symbols

3.1 Terms and definitions

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

3.1.1

stiffness modulus

relationship between maximum applied stress and maximum measured strain response and expressed as:

$$E = \frac{\sigma}{\varepsilon} \quad (1)$$