

**Asfaltsegud. Kuuma asfaltsegu katsemeetodid. Osa 16:
Vastupanu naastrehvide toimele**

**Bituminous mixtures - Test methods for hot mix asphalt
- Part 16: Abrasion by studded tyres**

EESTI STANDARDI EESSÕNA

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NATIONAL FOREWORD

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English version

Bituminous mixtures - Test methods for hot mix asphalt - Part 16: Abrasion by studded tyres

Mélanges bitumineux - Méthodes d'essai pour mélange
hydrocarboné à chaud - Partie 16: Abrasion par pneus à
crampons

Asphalt - Prüfverfahren für Heißasphalt - Teil 16: Abrieb
durch Spikereifen

This European Standard was approved by CEN on 2 March 2004.

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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 Central Secretariat has the same status as the official versions.

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Foreword

This document (EN 12697-16:2004) 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of an identical text or by endorsement, at the latest by January 2005, and conflicting national standards shall be withdrawn at the latest by August 2005.

This document includes a Bibliography.

This document is one of a series of standards as listed below:

EN 12697-1, *Bituminous mixtures - Test methods for hot mix asphalt - Part 1: Soluble binder content.*

EN 12697-2, *Bituminous mixtures - Test methods for hot mix asphalt - Part 2: Determination of particle size distribution.*

EN 12697-3, *Bituminous mixtures - Test methods for hot mix asphalt - Part 3: Bitumen recovery: Rotary evaporator.*

EN 12697-4, *Bituminous mixtures - Test methods for hot mix asphalt - Part 4: Bitumen recovery: Fractionating column.*

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

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

EN 12697-9, *Bituminous mixtures - Test methods for hot mix asphalt - Part 9: Determination of the reference density.*

EN 12697-10, *Bituminous mixtures - Test methods for hot mix asphalt - Part 10: Compactability.*

EN 12697-11, *Bituminous mixtures - Test methods for hot mix asphalt - Part 11: Determination of the affinity between aggregate and bitumen.*

EN 12697-12, *Bituminous mixtures - Test methods for hot mix asphalt - Part 12: Determination of the water sensitivity of bituminous specimens.*

EN 12697-13, *Bituminous mixtures - Test methods for hot mix asphalt - Part 13: Temperature measurement.*

EN 12697-14, *Bituminous mixtures - Test methods for hot mix asphalt - Part 14: Water content.*

EN 12697-15, *Bituminous mixtures - Test methods for hot mix asphalt - Part 15: Determination of the segregation sensitivity.*

EN 12697-16, *Bituminous mixtures - Test methods for hot mix asphalt - Part 16: Abrasion by studded tyres.*

EN 12697-17, *Bituminous mixtures - Test methods for hot mix asphalt - Part 17: Particle loss of porous asphalt specimen.*

EN 12697-18, *Bituminous mixtures - Test methods for hot mix asphalt - Part 18: Binder drainage.*

EN 12697-19, *Bituminous mixtures - Test methods for hot mix asphalt - Part 19: Permeability of specimen.*

EN 12697-20, *Bituminous mixtures - Test methods for hot mix asphalt - Part 20: Indentation using cube or Marshall specimens.*

EN 12697-21, *Bituminous mixtures - Test methods for hot mix asphalt - Part 21: Indentation using plate specimens.*

EN 12697-22, *Bituminous mixtures - Test methods for hot mix asphalt- Part 22: Wheel tracking.*

EN 12697-23, *Bituminous mixtures - Test methods for hot mix asphalt - Part 23: Determination of the indirect tensile strength of bituminous specimens.*

EN 12697-24, *Bituminous mixtures - Test methods for hot mix asphalt - Part 24: Resistance to fatigue.*

prEN 12697-25, *Bituminous mixtures - Test methods for hot mix asphalt - Part 25: Cyclic compression test.*

EN 12697-26, *Bituminous mixtures - Test methods for hot mix asphalt - Part 26: Stiffness.*

EN 12697-27, *Bituminous mixtures - Test methods for hot mix asphalt - Part 27: Sampling.*

EN 12697-28, *Bituminous mixtures - Test methods for hot mix asphalt - Part 28: Preparation of samples for determining binder content, water content and grading.*

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

EN 12697-30, *Bituminous mixtures - Test methods for hot mix asphalt - Part 30: Specimen preparation, 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.*

EN 12697-33, *Bituminous mixtures - Test methods for hot mix asphalt - Part 33: Specimen prepared by roller compactor.*

EN 12697-34, *Bituminous mixtures - Test methods for hot mix asphalt - Part 34: Marshall test.*

prEN 12697-35, *Bituminous mixtures - Test methods for hot mix asphalt - Part 35: Laboratory mixing.*

EN 12697-36, *Bituminous mixtures - Test methods for hot mix asphalt - Part 36: Determination of the thickness of a bituminous pavement.*

EN 12697-37, *Bituminous mixtures - Test methods for hot mix asphalt - Part 37: Hot sand test for the adhesivity of binder on precoated chippings for HRA.*

EN 12697-38, *Bituminous mixtures - Test methods for hot mix asphalt - Part 38: Common equipment and calibration.*

prEN 12697-39, *Bituminous mixtures - Test methods for hot mix asphalt - Part 39: Binder content by ignition.*

prEN 12697-40, *Bituminous mixtures - Test methods for hot mix asphalt - Part 40: In-situ drainability.*

prEN 12697-41, *Bituminous mixtures - Test methods for hot mix asphalt - Part 41: Resistance to de-icing fluids.*

prEN 12697-42, *Bituminous mixtures - Test methods for hot mix asphalt - Part 42: Amount of foreign matters in reclaimed asphalt.*

prEN 12697-43, *Bituminous mixtures - Test methods for hot mix asphalt - Part 43: Resistance to fuel.*

No existing European Standard is superseded.

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

1 Scope

This document describes test methods (method A and method B) for determining abrasion by studded tyres, tested on cylindrical specimens of bituminous mixtures.

NOTE Method A originates from the 'Prall'-method, which has been improved by comprehensive research work. According to Swedish research work, the method correlates with abrasion in the field. Method B originates from Finnish experience and correlates with abrasion in the field.

2 Normative references

The following referenced documents are indispensable for the application 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 for hot mix asphalt - Part 6: Determination of bulk density of bituminous specimens.*

EN 12697-27, *Bituminous mixtures - Tests methods for hot mix asphalt - Part 27: Sampling.*

EN 12697-30, *Bituminous mixtures - Test methods for hot mix asphalt - Part 30: Specimen preparation, 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.*

EN 12697-33, *Bituminous mixtures - Test methods for hot mix asphalt - Part 33: Specimen prepared by roller compactor.*

ISO 3290, *Rolling bearings – Balls - Dimensions and tolerances.*

3 Terms and definitions

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

3.1 abrasion

loss of mass by abrasive action, in millilitres (ml)

3.2 precision

closeness of agreement between independent test results obtained under stipulated conditions

NOTE 1 Precision depends only on the distribution of random errors and does not relate to the true value or the specified value.

NOTE 2 The measure of precision is usually expressed in terms of imprecision and computed as a standard deviation of the test results. Less precision is reflected by a larger standard deviation.