SLOVENSKI STANDARD
oSIST prEN 12697-33:2017

01-oktober-2017

Bitumenske zmesi - Preskusne metode - 33. del: Preskušanci, pripravljeni z valjastim zgoščevalnikom

Bituminous mixtures - Test methods - Part 33: Specimen prepared by roller compactor

Asphalt - Prüfverfahren - Teil 33: Probestückvorbereitung mittels Walzverdichtungsgerät

Mélanges bitumineux - Méthodes d'essai pour mélange hydrocarboné à chaud - Partie 33 : Préparation de corps d'épreuve au compacteur de plaque

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93.080.20 Materiali za gradnjo cest Road construction materials

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English Version

Bituminous mixtures - Test methods - Part 33: Specimen prepared by roller compactor

Mélanges bitumineux - Méthodes d'essai - Partie 33 : Préparation des corps d'épreuve au compacteur de plaques

Asphalt - Prüfverfahren - Teil 33: Probestückvorbereitung mittels Walzverdichtungsgerät

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 227.

If this draft becomes a European Standard, 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.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

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European foreword

This document (prEN 12697-33:2017) has been prepared by Technical Committee CEN/TC 227 "Road materials", the secretariat of which is held by DIN.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 12697-33:2003+A1:2007.

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

— inappropriate definition of moulds for steel wheel rollers deleted;

— Formulae (1) and (2) corrected;

— distance between twinned wheels clarified;

— requirement on timing added;

— column titles on Tables 2 to 4 corrected;

— hatching for plates in Figure 2 made vertical for clarity;

— method for steel roller sector described in more detail;

— pre-heating of mould clarified in 6.2.

This European Standard 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 — Part 2: Determination of particle size distribution*

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

EN 12697-4, *Bituminous mixtures — Test methods — Part 4: Binder 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 specimen*

EN 12697-7, *Bituminous mixtures — Test methods for hot mix asphalt — Part 7: Determination of the 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 12697-10, *Bituminous mixtures — Test methods for hot mix asphalt — Part 10: Compactibility*

EN 12697-11, *Bituminous mixtures — Test methods for hot mix asphalt — Part 11: Determination of the compatability 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*

prEN 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 cylindrical specimen (CY)*

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*

prEN 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*

EN 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 methods for hot mix asphalt — Part 29: Determination of the dimensions of bituminous specimen*

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 specimen 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*

EN 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: Method for the 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*

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

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

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

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

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

EN 12697-44, *Bituminous mixtures — Test methods for hot mix asphalt — Part 44: Crack propagation by semi-circular bending test*

EN 12697-45, *Bituminous mixtures — Test methods for hot mix asphalt — Part 45: Saturation ageing tensile stiffness (SATS) conditioning test*

EN 12697-46, *Bituminous mixtures — Test methods for hot mix asphalt — Part 46: Low temperature cracking and properties by uniaxial tension tests*

EN 12697-47, *Bituminous mixtures — Test methods for hot mix asphalt — Part 47: Determination of the ash content of natural asphalts*

prEN 12697-48, *Bituminous mixtures — Test methods— Part 48: Interlayer bonding*[1)]

EN 12697-49, *Bituminous mixtures — Test methods for hot mix asphalt — Part 49: Determination of friction after polishing*

1) In preparation.

prCEN/TS 12697-50, *Bituminous mixtures — Test methods — Part 50: Resistance to scuffing*[1)]

prEN 12697-51, *Bituminous mixtures — Test methods — Part 51: Surface shear strength test*[1)]

CEN/TS 12697-52, *Bituminous mixtures — Test methods — Part 52: Conditioning to address oxidative ageing*[1)]

prEN 12697-53, *Bituminous mixtures — Test methods — Part 53: Cohesion increase by spreadability-meter method*[1)]

1 Scope

This European Standard specifies the methods for compacting parallelepipedal specimens (slabs) of bituminous mixtures, to be used directly for subsequent testing, or from which test specimens are cut.

For a given mass of bituminous mixture, the specimens are prepared either under controlled compaction energy, or until a specified volume and therefore air voids content is obtained.

This European Standard describes the following methods of compaction:

— pneumatic tyre method;

— steel roller method;

— steel roller sector method.

This European Standard is applicable to bituminous mixtures manufactured in the laboratory or in a mixing plant.

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

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

3 Terms, definitions, symbols and abbreviations

3.1 Terms and definitions

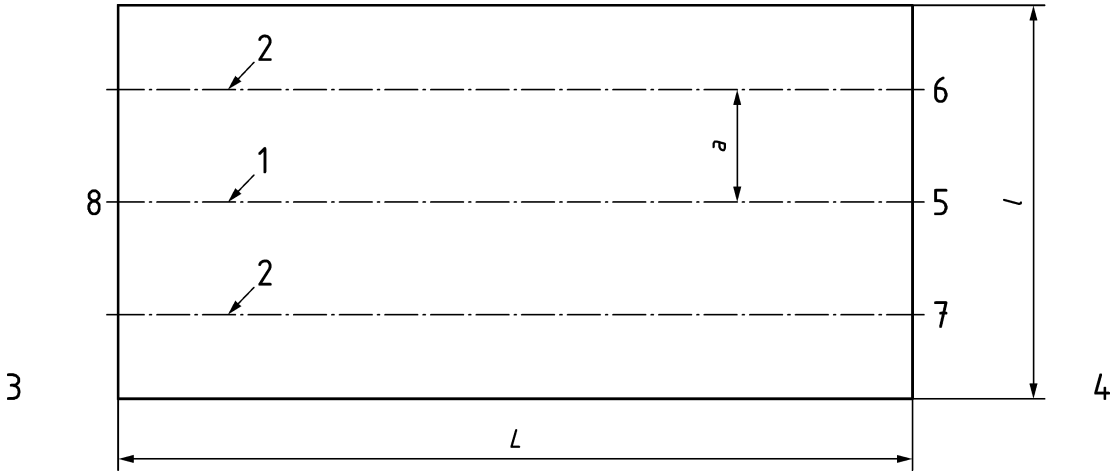
For the purposes of this document, the following terms and definitions apply.

3.1.1
pass
one forward or one backward motion of the rolling load

3.1.2
slab axis
axis of symmetry of slab parallel to the largest dimension of the mould

3.1.3
lateral axis
axis of a pass parallel to largest dimension of a mould; situated at distance *a* from the slab axis (see Figure 1)

3.1.4
lateral translation
distance *a* between the slab axis and the lateral axis



Key

1	axis	5	central position
2	lateral axis	6	rear position
3	left side	7	front position
4	right side	8	longitudinal translation of wheels

Figure 1 — Sketch plan of a slab, front face of equipment

3.1.5
rear position
lateral axis furthest from the front face of the equipment

3.1.6
central position
slab axis

3.1.7
front position
lateral axis nearest to the front face of the equipment

3.1.8
blocked axis mode
equipment operating mode in which the height of the wheel shaft stays constant in relation to the upper edge of mould during a pass

3.1.9
freed axis mode
equipment operation mode in which the load applied onto the slab remains constant during a pass

3.1.10
sweep plan
set of modes by which the wheel(s) pass(es) over the slab; including order of execution, and extent of lateral translation