SLOVENSKI STANDARD
SIST EN 12697-28:2002

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Bitumenske zmesi - Preskusne metode za vroče asfaltne zmesi - 28. del: Priprava vzorcev za določevanje deleža veziva, deleža vode in zrnavosti

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

Asphalt - Prüfverfahren für Heißasphalt - Teil 28: Vorbereitung von Proben zur Bestimmung des Bindemittelgehaltes, des Wassergehaltes und zur Korngrößenbestimmung

Mélanges bitumineux - Essais pour enrobés a chaud - Préparation des échantillons pour la détermination de la teneur en liant, de la teneur en eau et de la granularité

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Bituminous mixtures

Test methods for hot mix asphalt

Part 28: Preparation of samples for determining binder content, water content and grading

Mélange bitumineux – Essais pour enrobés à chaud – Partie 28: Préparation des échantillons pour la détermination de la teneur en liant, de la teneur en eau et de la granularité

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This European Standard was approved by CEN on 2000-11-24.

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

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CEN

European Committee for Standardization
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Contents

Foreword

This European Standard 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of an identical text or by endorsement, at the latest by June 2001, and conflicting national standards shall be withdrawn at the latest by August 2005.

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

This European Standard is one of a series of standards as listet below:

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

prEN 12697-2:1998, *Bituminous mixtures - Test methods for hot mix asphalt - Part 2: 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 for hot mix asphalt - Part 4: Binder recovery: Fractionating column*

prEN 12697-5:1996, *Bituminous mixtures - Test methods for hot mix asphalt - Part 5: Determination of the maximum density*

prEN 12697-6:1996, *Bituminous mixtures - Test methods for hot mix asphalt - Part 6: Determination of bulk density of bituminous specimen by hydro-static method*

prEN 12697-7:1996, *Bituminous mixtures - Test methods for hot mix asphalt - Part 7: Determination of bulk density of bituminous specimens by gamma rays*

prEN 12697-8:1996, *Bituminous mixtures - Test methods for hot mix asphalt - Part 8: Determination of the air voids content of bituminous materials*

prEN 12697-9:1997, *Bituminous mixtures - Test methods for hot mix asphalt - Part 9: Determination of the reference density, gyrator compactor*

prEN 12697-10:1996, *Bituminous mixtures - Test methods for hot mix asphalt - Part 10: Compactibility*

prEN 12697-11:1999, *Bituminous mixtures - Test methods for hot mix asphalt - Part 11: Determination of the affinity between aggregate and bitumen*

prEN 12697-12:1999, *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*

prEN 12697-15:1997, *Bituminous mixtures - Test methods for hot mix asphalt - Part 15: Determination of the segregation sensitivity of bituminous mixtures*

prEN 12697-16:2000, *Bituminous mixtures - Test methods for hot mix asphalt – Part 16: Abrasion by studded tyres*

prEN 12697-17, *Bituminous mixtures - Test methods for hot mix asphalt – Part 17: Partical loss of specimen*

prEN 12697-18:1997, *Bituminous mixtures - Test methods for hot mix asphalt - Part 18: Binder drainage from porous asphalt*

prEN 12697-19:2000, *Bituminous mixtures - Test methods for hot mix asphalt – Part 19: Permeability of specimen*

prEN 12697-20:1999, *Bituminous mixtures - Test methods for hot mix asphalt - Part 20: Indentation using cube or marshall specimens*

prEN 12697-21:1999, *Bituminous mixtures - Test methods for hot mix asphalt - Part 21: Indentation using plate specimens*

prEN 12697-22:1999, *Bituminous mixtures - Test methods for hot mix asphalt - Part 22: Wheel tracking*

prEN 12697-23:1999, *Bituminous mixtures - Test methods for hot mix asphalt - Part 23: Determination of the indirect tensile strength of bituminous specimens*

prEN 12697-24:1999, *Bituminous mixtures - Test methods for hot mix asphalt - Part 24: Resistance to fatique*

prEN 12697-25, *Bituminous mixtures - Test methods for hot mix asphalt – Part 25: Dynamic creep test*

prEN 12697-26:1999, *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*

prEN 12697-29:1996, *Bituminous mixtures - Test methods for hot mix asphalt - Part 29: Determination of the dimensions of bituminous specimen*

prEN 12697-30:2000, *Bituminous mixtures - Test methods for hot mix asphalt - Part 30: Specimen preparation, impact compactor*

prEN 12697-31:2000, *Bituminous mixtures - Test methods for hot mix asphalt - Part 31: Specimen preparation, gyratory compactor*

prEN 12697-32:1997, *Bituminous mixtures - Test methods for hot mix asphalt - Part 32: Laboratory compaction of bituminous mixtures by a vibratory compactor*

prEN 12697-33:1999, *Bituminous mixtures - Test methods for hot mix asphalt – Part 33: Specimen preparation, slab compactor*

prEN 12697-34:1999, *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*

prEN 12697-36:1996, *Bituminous mixtures - Test methods for hot mix asphalt - Part 36: Method for the determination of the thickness of a bituminous pavement*

prEN 12697-37:1999, *Bituminous mixtures - Test methods for hot mix asphalt - Part 37: Hot sand test for the adhesivity of binder on precoated chippings for HRA*

prEN 12697-38, *Common equipment and calibration*

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

No existing European Standard is superseded.

1 Scope

This European Standard describes test methods for preparing test portions for the determination of the binder, water content and grading of samples of bituminous mixtures, when the sample submitted to the laboratory has a mass greater than or equal to four times the test portion.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 58, S*ampling bituminous binders.*

EN 932-1, *Tests for general properties of aggregates – Part 1: Methods for sampling.*

prEN 12697-36:1996, *Bituminous mixtures - Test methods for hot mix asphalt – Part 36: Method for the determination of the thickness of a bituminous pavement.*

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 58 and the following apply.

3.1
representative sample
bulk sample consisting of a specified number of increments purposely taken to represent a specific quantity or area of material

NOTE A representative sample is assumed to have the same composition as the material sampled, within the limits of precision associated with the method of sampling.

3.2
laboratory sample
sample despatched to the laboratory

NOTE It may be the whole or part of the bulk or representative sample and should be of sufficient quantity for all tests required

3.3
test portion
part of the laboratory sample to be used for a specific test procedure to produce a single test result

3.4
test specimen
part of the test portion on which a single test is carried out

NOTE A number of tests may be necessary to produce a test result.

3.5
test result
result obtained by applying the test procedure to a test portion

NOTE When the test procedure is required to be carried out on more than one test specimen, the test result will be calculated as the mean result of a number of determinations.

4 Apparatus

4.1 Balance

4.2 Ruler

4.3 Circular saw, capable of cutting stone

4.4 Oven, conventional or microwave

4.5 Stopwatch

4.6 Metal tray (optional)

4.7 Sample splitter in accordance with EN 932-1 (such as that shown in Figure 1), optional

4.8 Shovel

4.9 Container

5 Preparation of laboratory samples of bituminous mixtures

5.1 Preliminary inspection and storage

5.1.1
On receipt of the laboratory sample inspect it and record its condition.

5.1.2
If a slab or a core cut from compacted material is to be stored prior to examination or separation of courses, take care so as to minimise deformation or deterioration of the material. Store slabs on a clean, hard, flat surface, preferably out of direct sunlight, with the final rolled surface at the bottom.

NOTE Cores of well compacted materials made with high viscosity binders will normally keep well standing vertically upside down on a clean bench in a cool room, but cores cut from less stable materials may require refrigeration especially for porous asphalt cores.

5.2 Pre-treatment of laboratory samples taken before and during laying

5.2.1 Binder drainage

If any binder drainage has occurred, collect and weigh as much of the drained material as possible and record the details. When the laboratory sample has been reduced to a suitable size for testing, add a proportionate representative weighed fraction of the drained material to the test portion. Record if the drained material can not be collected.

5.2.2 Uncoated aggregate

Record the presence of any uncoated or fractured aggregate but do not remove such aggregate.

5.3 Pre-treatment of laboratory samples taken after laying

5.3.1 General

If possible, record the average thickness (or thickness if there is more than one course) in accordance with prEN 12697-36:1996 and the presence of any extraneous material. Remove all extraneous material in accordance with the appropriate clause of this European Standard. If complete removal is not possible, this shall be recorded.

NOTE In most cases, total removal can only be effected by sawing.

5.3.2 Coated chippings

If possible, remove chippings by hand before starting the tests. If removal is not possible (e.g. due to deep embedment), record this and proceed with the tests.

NOTE 1 Coated chippings may normally be removed with a suitable tool after warming the sample. For this purpose a temperature approximately 40 °C below the appropriate maximum temperature given in Table 1 is suitable.

NOTE 2 It may be possible to identify and remove the chippings after extraction of the binder and if this is done an allowance for the mass of the chippings should be made in the test and the fact recorded on the test report.

5.3.3 Surface dressings

Remove any surface dressing, if possible. Record the presence of any visible penetration of the surface dressing binder into the sample.

NOTE Total removal will require sawing.

5.3.4 Tack coat or blinding grit

Record the presence of any tack coat or blinding grit.