

**Bitumen and bituminous binders - Measurement of
density and specific gravity - Capillary-stoppered
pycnometer method KONSOLIDEERITUD TEKST**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 15326:2007+A1:2009 sisaldab Euroopa standardi EN 15326:2007+A1:2009 ingliskeelset teksti.

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English Version

Bitumen and bituminous binders - Measurement of density and
specific gravity - Capillary-stoppered pycnometer method

Bitumes et liants bitumineux - Mesure de la masse
volumique et de la densité - Méthode du pycnomètre à
bouchon capillaire

Bitumen und bitumenhaltige Bindemittel - Messung der
Dichte und der relativen Dichte - Pycnometerverfahren mit
Kapillarstopfen

This European Standard was approved by CEN on 10 February 2007 and includes Amendment 1 approved by CEN on 5 April 2009.

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Foreword

This document (EN 15326:2007+A1:2009) has been prepared by Technical Committee CEN/TC 336 "Bituminous binders", the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by November 2009, and conflicting national standards shall be withdrawn at the latest by November 2009.

This document includes Amendment 1 approved by CEN on 2009-04-05.

This document supersedes EN 15326:2007.

The start and finish of text introduced or altered by amendment is indicated in the text by tags **A1** and **A1**.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

1 Scope

This European standard specifies a procedure for determining the specific gravity and density of bituminous binders at $(25,0 \pm 0,2) ^\circ\text{C}$ using the capillary-stoppered pycnometer method. Emulsions are excluded from the scope of this method.

NOTE 1 This method can also be used for other hydrocarbon binders, for bituminous binders from other sources, e.g. recovered from asphalt or after hardening and for bituminous binders containing filler. However, a lower precision is to be expected.

NOTE 2 This test method may be performed at other temperatures (i.e. $15 ^\circ\text{C}$). When doing so, the density values of water and isopropanol should be determined.

The pycnometer method shall be used as a reference method for determining the specific gravity and density of bituminous binders.

WARNING — Use of this standard may involve hazardous materials, operations and equipment. This standard does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

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 58, *Bitumen and bituminous binders – Sampling bituminous binders*

EN 1427, *Bitumen and bituminous binders – Determination of the softening point – Ring and Ball method*

EN 12594, *Bitumen and bituminous binders – Preparation of test samples*

3 Terms and definitions

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

3.1

density (ρ)

mass per unit of volume of a material, measured in unit of kg/m^3

NOTE 1 Standard temperature for determining the density of bituminous binders is $(25,0 \pm 0,2) ^\circ\text{C}$. Density, ρ , is calculated from specific gravity, d , of the bituminous binder.

NOTE 2 Density is used for converting volumes to mass as required by other standards, applications and in sale transactions.

3.2

specific gravity (d)

ratio of density of the bituminous binder, ρ , and density of a test liquid, ρ_T , measured under the same conditions, at $25,0 ^\circ\text{C}$

$$d_{25/25} = \frac{\rho}{\rho_T} \quad (1)$$