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Bitumens and bituminous binders - Determination of needle penetration

Táto norma obsahuje anglickú verziu európskej normy.

This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/25

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EUROPEAN STANDARD
NORME EUROPÉENNE
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EN 1426

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Supersedes EN 1426:2015

English Version

**Bitumens and bituminous binders - Determination of
needle penetration**

Bitumes et liants bitumineux - Détermination de la
pénétrabilité à l'aiguille

Bitumen und bitumenhaltige Bindemittel -
Bestimmung der Nadelpenetration

This European Standard was approved by CEN on 16 September 2024.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN 1426:2024 (E)

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European foreword

This document (EN 1426:2024) has been prepared by Technical Committee CEN/TC 336 “Bitumens and 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of an identical text or by endorsement, at the latest by May 2025, and conflicting national standards shall be withdrawn at the latest by May 2025.

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

This document supersedes EN 1426:2015.

EN 1426:2024 includes the following significant changes with respect to EN 1426:2015:

- a) Clause 1, Scope, has been updated;
- b) Clause 2, Normative references, has been updated;
- c) Clause 5, Apparatus, has been updated and revised, so that:
 - the specifications of the penetrometer (5.1) have been further detailed and a substructure of 5.1 has been introduced;
 - the specifications of the penetration needle and ferrule (5.2) have been further detailed and a substructure has been introduced;
 - the specifications of the test sample container (5.3) have been further detailed to include containers of different volumes for which a substructure has been introduced;
 - the transfer equipment (5.5) now consists of a transfer bath and a transfer dish;
- d) Clause 6, Calibration and verification, has been added containing the revised and expanded specifications of former subclause 5.8;
- e) Clause 7, Sampling, has been updated and further detailed regarding, e.g. filling the test sample container, duration between test sample preparation and start of testing and the specification of the ambient temperature;
- f) Clause 8, Procedure, has been updated and revised to include, e.g. the updated apparatus and automatic surface detection;
- g) the former subclause 7.1, Preparation of the needle holder and needles, has been split up into new subclause 8.1, Preparation of the penetrometer, and new subclause 8.2, Preparation of the penetration needles, and the specifications of former subclause 5.2.2 on the continuous check of penetration needles have been move there;
- h) Clause 11, Test report, has been updated;
- i) Figures 1 and 2 have been updated;
- j) the Bibliography has been updated.

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Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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

1 Scope

This document specifies a method for the determination of the needle penetration of bitumens and bituminous binders.

The standard procedure for the determination of the needle penetration (consistency) is described for penetrations up to $(330 \times 0,1)$ mm at a temperature of 25 °C. The method also allows for penetrations up to $(500 \times 0,1)$ mm using a longer needle.

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

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1425, *Bitumen and bituminous binders — Characterization of perceptible properties*

EN 10088-3, *Stainless steels — Part 3: Technical delivery conditions for semi-finished products, bars, rods, wire, sections and bright products of corrosion resistant steels for general purposes*

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

EN 12597, *Bitumen and bituminous binders — Terminology*

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