



NSAI
Standards

Irish Standard
I.S. EN 12595:2014

Bitumen and bituminous binders - Determination of kinematic viscosity

I.S. EN 12595:2014

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NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

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English Version

Bitumen and bituminous binders - Determination of kinematic viscosity

Bitumes et liants bitumineux - Détermination de la viscosité cinématique

Bitumen und bitumenhaltige Bindemittel - Bestimmung der kinematischen Viskosität

This European Standard was approved by CEN on 16 August 2014.

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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 CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (EN 12595:2014) 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of an identical text or by endorsement, at the latest by May 2015 and conflicting national standards shall be withdrawn at the latest by May 2015.

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

This document supersedes EN 12595:2007.

In comparison with EN 12595:2007, the following significant changes have been made:

- changed/added wording of the Warning in the Scope;
- EN 12607-2, *Bitumen and bituminous binders — Determination of the resistance to hardening under the influence of heat and air — Part 2: TFOT Method* was added as a normative reference in Clause 2;
- the reference to mercury thermometer has been deleted (see subclause 5.2) and Annex C is informative;
- alternative cleaning procedure added as optional in subclause 7.2.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

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EN 12595:2014 (E)

1 Scope

This European Standard specifies a method for the determination of the kinematic viscosity of bituminous binders at 60 °C and 135 °C, in a range from 6 mm²/s to 300 000 mm²/s. Other temperatures are possible if calibration constants are known. Bituminous emulsions are not covered within the scope of this method.

NOTE Emulsions containing bituminous binders are not considered to be covered by this method. The method can be used for recovered and/or stabilized binders obtained from emulsions.

Results for this method can be used to calculate dynamic viscosity when the density of the test material is known or can be determined.

WARNING — Use of this European Standard can involve hazardous materials, operations and equipment. This European Standard does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this European Standard to identify the hazards and assess the risks involved in performing this test method and to implement sufficient control measures to protect individual operators (and the environment). This includes appropriate safety and health practices and determination of the applicability of regulatory limitations prior to use.

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

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

EN 12607-2, *Bitumen and bituminous binders - Determination of the resistance to hardening under the influence of heat and air - Part 2: TFOT Method*

EN ISO 2592, *Determination of flash and fire points - Cleveland open cup method (ISO 2592)*

EN ISO 3696:1995, *Water for analytical laboratory use - Specification and test methods (ISO 3696:1987)*

3 Terms and definitions

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

3.1

kinematic viscosity

ratio between the dynamic viscosity and the density of a liquid at the temperature of viscosity measured

Note 1 to entry: Kinematic viscosity is a measure of a liquid's resistance to flow under gravity.

Note 2 to entry: The SI unit of kinematic viscosity is m²/s; for practical use, a sub-multiple (mm²/s) is more convenient.

3.2

density

mass of a liquid divided by its volume

Note 1 to entry: When reporting density, the unit of density used, together with the temperature, is explicitly stated, for example kilogram per cubic metre.

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