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BSI Standards Publication

Bitumen and bituminous binders — Determination of the tensile properties of bituminous binders by the tensile test method

bsi.

National foreword

This British Standard is the UK implementation of EN 13587:2016. It supersedes BS EN 13703:2003 (dual numbered as BS 2000-515:2003) and BS EN 13587:2010 (dual numbered as BS 2000-519:2010) which are withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PTI/13, Petroleum Testing and Terminology.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Energy Institute, under the brand of IP, publishes and sells all Parts of BS 2000, and all BS EN and BS ISO petroleum test methods that would be part of BS 2000, both in its annual publication "IP Standard Test Methods for analysis and testing of petroleum and related products, and British Standard 2000 Parts" and individually.

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English Version

Bitumen and bituminous binders - Determination of the tensile properties of bituminous binders by the tensile test method

Bitumes et liants bitumineux - Détermination des caractéristiques de traction des liants bitumineux par la méthode d'essai de traction

Bitumen und bitumenhaltige Bindemittel - Bestimmung der Streckeigenschaften von bitumenhaltigen Bindemitteln mit dem Zugprüfverfahren

This European Standard was approved by CEN on 22 July 2016.

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Contents

Page

European foreword

This document (EN 13587:2016) has been prepared by Technical Committee CEN/TC 336 "Bituminous binders", the secretariat of which is held by AFNOR/BNPé.

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of an identical text or by endorsement, at the latest by May 2017, and conflicting national standards shall be withdrawn at the latest by May 2017.

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 13587:2010 and EN 13703:2003.

This document contains the following changes compared to EN 13587:2010:

— updated normative references;

— additional terms and definitions;

— deleting determination of deformation energy by EN 13703;

— introduction of calculation methods of deformation energy in the standard;

— updated bibliography;

— combining time frame EN 13589 with EN 13587;

— renaming "conventional energy" into "cohesion energy";

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1 Scope

This European Standard specifies a method for determining the tensile properties of a bituminous binder, in particular those of a polymer modified bitumen, by means of a tensile test.

NOTE The tensile properties, more particularly the tensile stress, the elongation and energy, at the yield point and on fracture, are customarily used as a criterion for assessing the quality of these materials.

WARNING — The use of this European Standard may 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 establish appropriate safety and health practices and determine 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 ISO 527 (all parts), *Plastics — Determination of tensile properties*

ISO 5893, *Rubber and plastics test equipment — Tensile, flexural and compression types (constant rate of traverse) — Specification*

3 Terms and definitions

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

3.1
tensile force
force undergone by a specimen subjected to extension, expressed in Newton (N)

3.2
elongation
increase in length of a specimen, expressed in metres

Note 1 to entry: Elongation is also expressed in % from the initial length. It is calculated as [(new length – initial length)/initial length] × 100.

3.3
brittle break
rupture happening at the beginning of the test before the flowing threshold when the stress-strain curve is still linear

3.4
flow threshold
first maximum of the stress-strain curve