PD CEN/TS 15963:2014

BSI Standards Publication

Bitumen and bituminous binders — Determination of the fracture toughness temperature by a three point bending test on a notched specimen

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National foreword

This Published Document is the UK implementation of CEN/TS 15963:2014. It supersedes DD CEN/TS 15963:2010, BS 2000-584:2010 which is withdrawn.

The UK participation in its preparation was entrusted by Technical Committee B/510, Road materials, to Subcommittee B/510/19, Bitumen and related products.

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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English Version

Bitumen and bituminous binders - Determination of the fracture toughness temperature by a three point bending test on a notched specimen

Bitumes et liants bitumineux - Détermination de la température de résistance à la fissuration par un essai de flexion 3 points sur un barreau entaillé

Bitumen und bitumenhaltige Bindemittel - Bestimmung der Bruchwiderstandstemperatur mittels eines Drei-Punkt-Biegeversuches an einem gekerbten Probekörper

This Technical Specification (CEN/TS) was approved by CEN on 16 December 2013 for provisional application.

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Foreword

This document (CEN/TS 15963:2014) has been prepared by Technical Committee CEN/TC 336 “Bituminous binders”, the secretariat of which is held by AFNOR.

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1 Scope

This Technical Specification specifies a method for the determination of the Fracture Toughness temperature, T_{FT}, of bituminous binders by means of a three point bending test on a notched binder sample.

WARNING — The use of this Technical Specification can involve hazardous materials, operations and equipment. This Technical Specification does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this Technical Specification to establish appropriate safety and health practices and to determine the applicability of regulatory limitations prior to use. For environmental reasons, it is recommended to limit the use of products, solvents and energy to minimum in order to reduce the emissions to air, water and soil.

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*

3 Terms and definitions

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

3.1
maximum force
F
highest force measured during the bending test

Note 1 to entry: The test is done in the brittle state or close to that, so that the maximum force is considered as the onset of the crack propagation.

Note 2 to entry: Force is expressed in newtons (N).

3.2
displacement at maximum force
D
bending of the test beam from the beginning of the test (from the zero point) to the break point

Note 1 to entry: Displacement is expressed in millimetres (mm).

3.3
work
W
area under the force-displacement curve from the beginning of the test to the break of the sample, i.e. at the maximum force

Note 1 to entry: Work is expressed in newtons·metres (N·m) or in Joules (J).