

Bitumen and bituminous binders — Determination of cohesion of bituminous binders with pendulum test

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British Standard

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National foreword

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Bitumes et liants bitumineux - Détermination de la cohésion des liants bitumineux par la méthode du mouton-pendule

Bitumen und bitumenhaltige Bindemittel - Bestimmung der Kohäsion von bitumenhaltigen Bindemitteln mit der Pendelprüfung

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Foreword

This document (EN 13588:2004) 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of an identical text or by endorsement, at the latest by August 2004, and conflicting national standards shall be withdrawn at the latest by August 2004.

Annexes A and B are normative.

This document includes a Bibliography.

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Introduction

The cohesion of the binder is one of the measures of the performance of a surface dressing. It is important to use binders which have sufficient level of cohesion according to the level of traffic to be supported by the surface dressings. A knowledge of cohesion enables the choice of binder type for given traffic and site conditions.

This European Standard describes a method for determining the cohesion of a binder as a main component of a surface dressing, and how to draw the cohesion curve as a function of temperature.

1 Scope

This European Standard specifies a method for measuring the cohesion of bituminous binders at temperatures in the range of -20 °C to 80 °C and for expressing the relationship between cohesion and temperature.

This method is applicable for pure bitumen, modified bitumen and fluxed bitumen; in the case of fluxed bitumen, the test can be performed on the binder containing fluxant or on binder from which the solvent has been removed. For bitumen emulsions, the test is carried out on the residual binder obtained after recovery and the method used to recover the binder should be reported.

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

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 58 ¹⁾, *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 European Standard, the following term and definition applies.

cohesion

energy per unit area required to fully detach a cube from the support, with the previously-bonded faces of cube and support remaining fully covered by binder

NOTE Where the cube remains attached to the support after elastic displacement, the energy value measured by the test is always less than the true cohesion value, so the test result can be used to establish that the binder has more than a specified minimum value of cohesion.

4 Symbols and abbreviations

For the purposes of this European Standard, the following symbols and abbreviations apply.

α
angle indicated by the pointer after launching the pendulum and impacting a cube placed on and adhered to the support by binder

¹⁾ In course of revision.