BRITISH STANDARD

BS EN
13880-4:2003

Hot applied joint sealants —

Part 4: Test method for the determination of heat resistance — Change in penetration value

The European Standard EN 13880-4:2003 has the status of a British Standard

ICS 93.080.20

BSI
British Standards

National foreword

This British Standard is the official English language version of EN 13880-4:2003.

The UK participation in its preparation was entrusted by Technical Committee B/510, Road materials, to Subcommittee B/510/3, Materials for concrete roads, which has the responsibility to:

— aid enquirers to understand the text;

— present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;

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This British Standard, was published under the authority of the Standards Policy and Strategy Committee on 18 June 2003

Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 6, an inside back cover and a back cover.

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EUROPEAN STANDARD

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English version

Hot applied joint sealants - Part 4: Test method for the determination of heat resistance - Change in penetration value

Produits de scellement de joints appliqués à chaud - Partie 4: Méthode d'essai pourla détermination de la résistance à là chaleur - Variation de la pénétrabilité

Heiß verarbeitbare Fugenmassen - Teil 4: Prüfverfahren zur Bestimmung der Wärmebeständigkeit - Änderung der Konus-Penetration

This European Standard was approved by CEN on 25 March 2003.

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Foreword

This document (EN 13880-4:2003) has been prepared by Technical Committee CEN/TC 227 "Road materials", the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by December 2003, and conflicting national standards shall be withdrawn at the latest by March 2005.

This European Standard is one of a series of standards as listed below:

prEN 13880-1	Hot applied joint sealants — Part 1: Test method for the determination of density at 25 °C
prEN 13880-2	Hot applied joint sealants — Part 2: Test method for the determination of cone penetration at 25 °C
EN 13880-3	Hot applied joint sealants — Part 3: Test method for the determination of penetration and recovery (resilience)
EN 13880-4	Hot applied joint sealants — Part 4: Test method for the determination of heat resistance — Change in penetration value
prEN 13880-5	Hot applied joint sealants — Part 5: Test method for the determination of flow resistance
prEN 13880-6	Hot applied joint sealants — Part 6: Test method for the preparation of samples for testing
prEN 13880-7	Hot applied joint sealants — Part 7: Function testing of joint sealants
prEN 13880-8	Hot applied joint sealants — Part 8: Test method for the determination of the change in weight of fuel resistance joint sealants after fuel immersion
EN 13880-9	Hot applied joint sealants — Part 9: Test method for the determination of compatibility with asphalt pavements
prEN 13880-10	Hot applied joint sealants — Part 10: Test method for the determination of adhesion and cohesion following continuous extension and compression
EN 13880-11	Hot applied joint sealants — Part 11: Test method for the preparation of asphalt test blocks used in the function test and for the determination of compatibility with asphalt pavement*s*
prEN 13880-12	Hot applied joint sealants — Part 12: Test method for the manufacture of concrete test blocks for bond testing (recipe methods)
prEN 13880-13	Hot applied joint sealants — Part 13: Test method for the determination of the discontinuous extension (adherence test)

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This European Standard describes a method for determining the effects of storage at elevated temperatures on samples of hot applied joint sealants by comparing the cone penetration and resilience values before and after storage.

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).

prEN 13880-2:2000, *Hot applied joint sealants — Part 2: Test method for the determination of cone penetration at 25 °C.*

EN 13880-3:2003, *Hot applied joint sealants — Part 3: Test method for the determination of penetration and recovery (resilience).*

ISO 188, *Rubber, vulcanized or thermoplastic — Accelerated ageing and heat resistance tests.*

3 Term and definition

For the purposes of this European Standard the following term and definition applies:

3.1
change in penetration value
change of the cone penetration and resilience before and after storage at elevated temperature

4 Principle

A portion of the laboratory sample is poured into metal containers to provide the test specimens for examination. Two specimens are placed in a oven at a temperature of (70 1) °C for a period of (168 2) h, then cooled in air and conditioned in the water bath at (25,0 0,1) °C. After conditioning, the specimens are tested to determine the cone penetration and resilience values.

The test results obtained before and after storage at elevated temperature are reported according to prEN 13880-2 and EN 13880-3.

5 Apparatus

5.1 Laboratory oven complying with ISO 188 and capable of maintaining the specimens at a temperature of (70 1) °C.

6 Procedure

6.1 Cone penetration

Determine the cone penetration before and after storage at elevated temperature according to prEN 13880-2.

6.2 Penetration and recovery (resilience)

Determine the penetration and recovery (resilience) before and after storage at elevated temperature according to EN 13880-3.

6.3 Test conditions for storage at elevated temperature

Store the test specimens in the oven according to 5.1 at (70 2) h.

6.4 Conditioning after storage at elevated temperature

Remove the specimens after the storage and protect them against dust and allow to cool in air at a temperature of (23 2) °C for a period of (1,75 0,25) h.

7 Expression of results

7.1 Report the test results for the cone penetration before and after storage at elevated temperature in 0,1 mm according to prEN 13880-2:2000, clause 9.

7.2 Report the test results of the recovery R before and after storage at elevated temperature, calculated according to EN 13880-3:2003, clause 9.

8 Precision

Estimates of the repeatability and reproducibility of this test method and of the variability due to sampling are not available as yet but they will be included by amendment when known.

9 Test report

The test report shall state that the test was carried out in accordance with this European Standard and shall include the following information:

a) name of sample;

b) source of sample;

c) batch number and date of manufacture where appropriate or expiry date;

d) the date of testing and results obtained;

e) the name of the analyst and test laboratory.

Bibliography

prEN 13880-6, *Hot applied joint sealants — Part 6: Test method for the preparation of samples for testing.*

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