

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 pavements**

The European Standard EN 13880-11:2003 has the status of a
British Standard

ICS 93.080.20

National foreword

This British Standard is the official English language version of EN 13880-11:2003.

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;
- monitor related international and European developments and promulgate them in the UK.

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

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the *BSI Catalogue* under the section entitled “International Standards Correspondence Index”, or by using the “Search” facility of the *BSI Electronic Catalogue* or of British Standards Online.

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

Compliance with a British Standard does not of itself confer immunity from legal obligations.

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.

The BSI copyright date displayed in this document indicates when the document was last issued.

Amendments issued since publication

Amd. No.	Date	Comments

© BSI 18 June 2003

ISBN 0 580 42099 X

English version

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 pavements

Produits de scellement de joints appliqués à chaud - Partie 11: Méthode d'essai pour la préparation des blocs asphaltiques destinés au test fonctionnel et pour la détermination de compatibilité avec les revêtements bitumineux

Heiß verarbeitbare Fugenmassen - Teil 11: Prüfverfahren zur Herstellung von Asphalt-Probekörpern zur Verwendung in der Funktionsprüfung und zur Bestimmung der Verträglichkeit mit Asphalten

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

CEN members are bound to comply with the CEN/GENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents

page

Foreword.....	3
1 Scope	4
2 Normative references	4
3 Principle	4
4 Apparatus	4
5 Asphalt	5
6 Preparation and conditioning of test material	5
7 Preparation of asphalt for test blocks	5
8 Preparation of the test blocks	5
9 Storage.....	5
10 Report for asphalt blocks preparing	6

Foreword

This document (EN 13880-11:2003) 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 pavements
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 preparing asphalt blocks intended for testing of joint sealants according to prEN 13880-7 and EN 13880-9.

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 12591, *Bitumen and bituminous binders — Specification for paving grade bitumens.*

EN 12697-32, *Bituminous mixtures — Test methods for hot mix asphalt — Part 32: Laboratory compaction of bituminous mixtures by a vibratory compactor.*

prEN 12697-35, *Bituminous mixtures — Test methods for hot mix asphalt — Part 35: Laboratory mixing.*

EN 13043, *Aggregates for bituminous mixtures and surface treatments for roads, airfield and other trafficked areas.*

prEN 13880-7, *Hot applied joint sealants — Part 7: Function testing of joint sealants.*

EN 13880-9, *Hot applied joint sealants — Part 9: Test method for the determination of compatibility with asphalt pavements.*

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

3 Principle

Hot mix asphalt, laboratory mixed or direct from an asphalt plant, is filled into paper boxes or metal containers, approximately 10 kg each, heated at specified temperature and then transferred to a moulding box and compacted by means of a vibrating machine to a homogenous asphalt block in the moulding box. After cooling to room temperature the asphalt block shall be taken out and sawed to the sizes required for the specimens.

4 Apparatus

4.1 Heating chamber, capable of heating approximately 20 kg asphalt to 180 °C.

4.2 Moulding box, made of sturdy wood or other resistant materials. The mould shall have a depth of 100 mm.

NOTE The other dimensions of the box depend on the number of specimens needed for testing.

4.3 Equipment to compact the asphalt in accordance with to EN 12697-32.

5 Asphalt

The quality of the hot mixed asphalt shall be in accordance with EN 12697-35. Whether the asphalt is laboratory mixed or comes directly from an asphalt plant it shall be in accordance with the following recipe:

- ¾ bitumen: 6,4 (% by mass) in the mix;
- ¾ aggregate degradation:

chippings	2/16 mm	: 52 (% in mass)
sand	0,075/2 mm	: 38 (% in mass)
<u>filler</u>	<u>0/0,075 mm</u>	<u>: 10 (% in mass)</u>
total	0/16 mm	: 100 (% in mass);
- ¾ bitumen, penetration grade 70/100 according to EN 12591;
- ¾ aggregates according to EN 13043.

6 Preparation and conditioning of test material

Heat the asphalt stored in the boxes in a heating chamber up to 180 °C in accordance with ISO 188. During the heating the asphalt shall remain in the boxes in which it was delivered. The boxes shall be closed to prevent air entering the box.

7 Preparation of asphalt for test blocks

When the asphalt is heated up to 180 °C in accordance with ISO 188, move it to the moulding box where the asphalt is placed and levelled in such a way as to give an excess of approximately 10 mm. The asphalt is then compacted by means of a vibrating machine to a homogenous compound in accordance with EN 12697-32. The air voids shall be between 2 % and 4 % in volume.

8 Preparation of the test blocks

When the asphalt block has been cooled, take it out of the box and saw it to the required shapes:

- ¾ (75 ± 1) mm × (25,0 ± 0,5) mm × (12,0 ± 0,5) mm for test specimens in accordance with prEN 13880-7;
- ¾ (100 ± 1) mm × (100 ± 1) mm × (100 ± 1) mm for test specimens in accordance with EN 13880-9.

9 Storage

The asphalt specimens shall be stored in a refrigerator at a temperature between – 2 °C and – 4 °C to prevent the samples from sticking together until such time as the test specimens are prepared in accordance with prEN 13880-7 and EN 13880-9.

10 Report for asphalt blocks preparing

- a) mix composition;
- b) date and time of production;
- c) origin and size distribution of the aggregates;
- d) date of preparation and time of storage of the asphalt blocks;
- e) the name of the preparator and laboratory.

BSI — British Standards Institution

BSI is the independent national body responsible for preparing British Standards. It presents the UK view on standards in Europe and at the international level. It is incorporated by Royal Charter.

Revisions

British Standards are updated by amendment or revision. Users of British Standards should make sure that they possess the latest amendments or editions.

It is the constant aim of BSI to improve the quality of our products and services. We would be grateful if anyone finding an inaccuracy or ambiguity while using this British Standard would inform the Secretary of the technical committee responsible, the identity of which can be found on the inside front cover.
Tel: +44 (0)20 8996 9000. Fax: +44 (0)20 8996 7400.

BSI offers members an individual updating service called PLUS which ensures that subscribers automatically receive the latest editions of standards.

Buying standards

Orders for all BSI, international and foreign standards publications should be addressed to Customer Services. Tel: +44 (0)20 8996 9001.
Fax: +44 (0)20 8996 7001. Email: orders@bsi-global.com. Standards are also available from the BSI website at <http://www.bsi-global.com>.

In response to orders for international standards, it is BSI policy to supply the BSI implementation of those that have been published as British Standards, unless otherwise requested.

Information on standards

BSI provides a wide range of information on national, European and international standards through its Library and its Technical Help to Exporters Service. Various BSI electronic information services are also available which give details on all its products and services. Contact the Information Centre.
Tel: +44 (0)20 8996 7111. Fax: +44 (0)20 8996 7048. Email: info@bsi-global.com.

Subscribing members of BSI are kept up to date with standards developments and receive substantial discounts on the purchase price of standards. For details of these and other benefits contact Membership Administration.
Tel: +44 (0)20 8996 7002. Fax: +44 (0)20 8996 7001.
Email: membership@bsi-global.com.

Information regarding online access to British Standards via British Standards Online can be found at <http://www.bsi-global.com/bsonline>.

Further information about BSI is available on the BSI website at <http://www.bsi-global.com>.

Copyright

Copyright subsists in all BSI publications. BSI also holds the copyright, in the UK, of the publications of the international standardization bodies. Except as permitted under the Copyright, Designs and Patents Act 1988 no extract may be reproduced, stored in a retrieval system or transmitted in any form or by any means – electronic, photocopying, recording or otherwise – without prior written permission from BSI.

This does not preclude the free use, in the course of implementing the standard, of necessary details such as symbols, and size, type or grade designations. If these details are to be used for any other purpose than implementation then the prior written permission of BSI must be obtained.

Details and advice can be obtained from the Copyright & Licensing Manager.
Tel: +44 (0)20 8996 7070. Fax: +44 (0)20 8996 7553.
Email: copyright@bsi-global.com.