BRITISH STANDARD

BS EN
13880-6:2004

Hot applied joint sealants —

Part 6: Method for the preparation of samples for testing

The European Standard EN 13880-6:2004 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 13880-6:2004.

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.

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Summary of pages

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EUROPEAN STANDARD

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English version

Hot applied joint sealants - Part 6: Method for the preperation of samples for testing

Produits de scellement de joints appliqués à chaud - Partie 6: Méthode d'essai pour la préparation des échantillons destinés à l'essai

Heiß verarbeitbare Fugenmassen - Teil 6: Prüfverfahren zur Vorbereitung von Proben für die Prüfung

This European Standard was approved by CEN on 7 November 2003.

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Foreword

This document (EN 13880-6:2004) 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of an identical text or by endorsement, at the latest by July 2004, and conflicting national standards shall be withdrawn at the latest by March 2005.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:

EN 13880-1, *Hot applied joint sealants — Part 1: Test method for the determination of density at 25 °C.*

EN 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 selants — 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.*

EN 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 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.*

EN 13880-12, *Hot applied sealants — Part 12: Test method for the manufacture of concrete test blocks for testing (recipe methods).*

EN 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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

1 Scope

This European Standard describes test methods for the preparation of samples for testing hot applied joint sealants for use in joints in roads, airfields and other concrete pavements.

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 14188-1, *Joint fillers and sealants — Part 1: Specifications for hot applied sealants*.

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in prEN 14188-1 and the following apply.

3.1
sample
one or more original container of the hot applied joint sealant. The mass of the sample should be at least 10 kg

3.2
increment
representative part of a sample

3.3
portion
one of several portions of about 50 g of the increment

3.4
test sample
several portions melted for preparing the test specimens. The test sample should be representative for the sample

3.5
test specimen
piece with certain dimensions according to the test standards

4 Principle

Preparation of test samples for testing hot applied joint sealants. The hot applied joint sealant is heated for 6 h at save heating temperature for preparing the test specimens.

5 Apparatus

5.1 An oil bath, employing a high flash point oil as the transfer medium shall be used for heating the joint sealant before pouring into test moulds. It shall have an inner container. The oil shall have a flash point of not less than 285 °C.

The oil bath preferably constructed of sheet copper not thicker than 1,5 mm, shall have either a cylindrical recess into which the inner container fits loosely, or the inner container shall be suspended in the oil. The oil shall be free to circulate round the bottom and sides of the cylindrical recess, or the bottom and sides of the container, according to the design of apparatus adopted, to at least the same level as the level of the sealant.

5.2 An inner container shall be made of metal, not thicker than approximately 1 mm and preferably formed by spinning or pressing. The joints, if any, shall be welded or brazed, and shall be leakproof.

The container shall be approximately 100 mm in diameter and 150 mm deep. It may have a handle and shall be provided with a loose-fitting lid with facilities for allowing the admission of a stirrer and thermometer. A suitable design is shown in Figures 1 and 2.

5.3 Stirrer, means for stirring continuously both the oil and the joint sealant being heated shall be provided. A suitable stirrer for stirring the sealant is shown in Figure 3.

5.4 Thermometer, with an accuracy of 1 °C, for temperature measurements between + 23 °C to + 200 °C.

6 Procedure

6.1 Marking, labelling and packing

Report quantity, packing and labelling of the samples as well as any damage to the sample or container.

6.2 Preparation of test sample

Prepare a test sample of hot applied sealant, approximately 1 kg consisting of about 20 – as far as possible equal portions which are from increment by means of heated knife vertical from top to bottom. The test sample shall be representative of the increment from which it is taken.

Heat the oil bath with the inner container fixed in position, until the oil is at the safe heating temperature for the sealant and maintain it at this temperature.

Place portions of the test sample in the inner container one at a time at intervals of approximately 0,5 min starting when the temperature of the oil has reached at least the safe heating temperature.

With the lid in position stir continuously both the oil and the test sample in the inner container.

Heat the test sample until its temperature reaches the safe heating temperature. The time taken shall not exceed 1,5 h.

Keep the test sample after reaching the safe heating temperature 6 h 10 min at safe heating temperature 5 °C.

6.3 Pouring of test specimens

Pour the test sample for preparation of the test specimens as soon as possible, taking care to avoid any contamination. If necessary, carefully remove any small air bubbles from the sealant surface, using, for example, a pilot flame or a hot glass rod.

Record the actual temperature at the end of the pouring.

7 Precision

Estimates of the repeatability and reproducibility of these test methods are not available yet but they will be included by amendments when known.

8 Test report

The test report shall confirm 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;

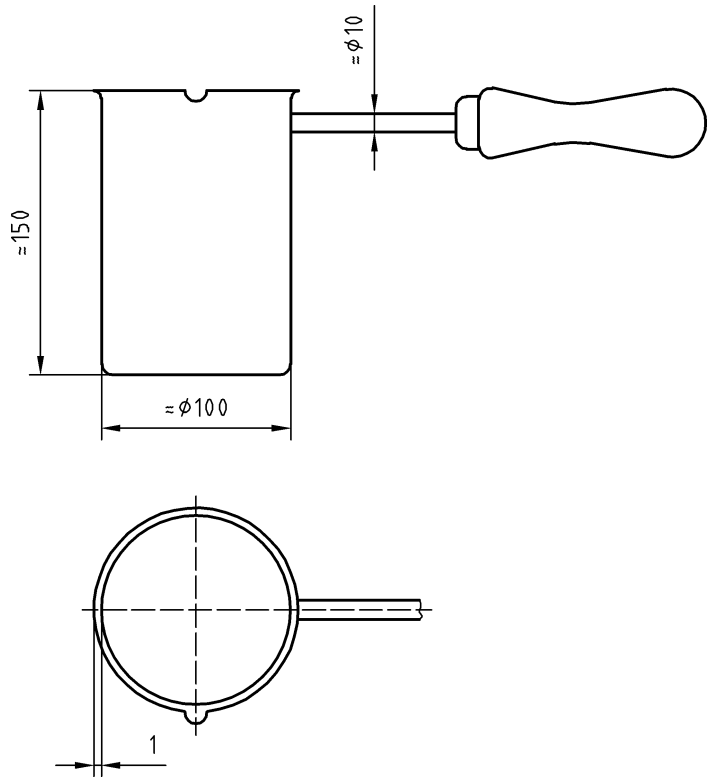
c) batch number and date of manufacturer when appropriate or expiry date;

d) quantity, packing and labelling of the sample as well as any damage of the sample or container;

e) date of preparation;

f) the name of the preparator and laboratory.

All dimensions in millimetres

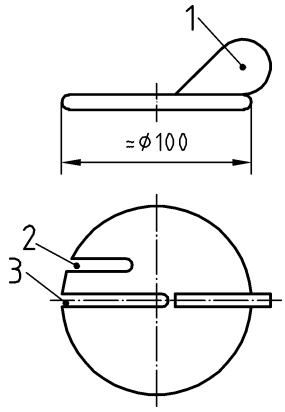


Key

1 Thickness of metal for inner container 1 approximately

Figure 1 — Inner container in which sample is heated for pouring specimens

All dimensions in millimetres

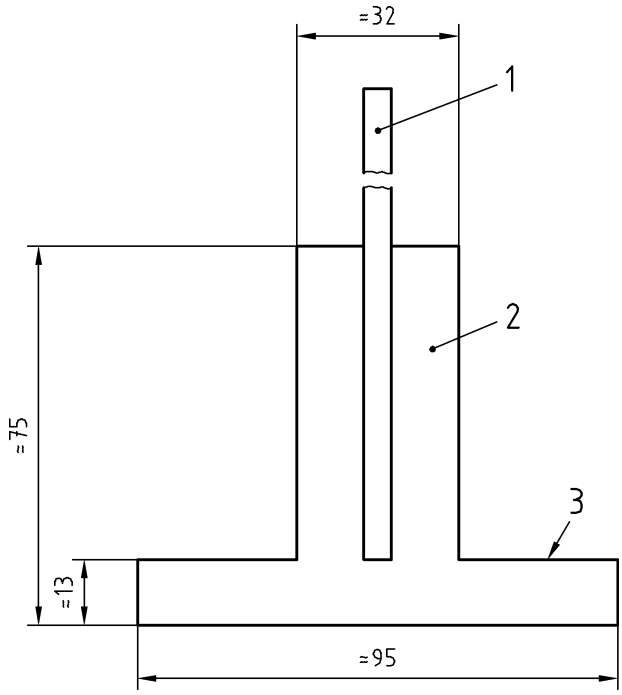


Key

1 Heat-resistant handle
2 Slot for thermometer
3 Slot for stirrer

Figure 2 — Lid for inner container

All dimensions in millimetres



Key

1 Metal rod
2 3 mm thick sheet metal
3 Ends slightly twisted

Figure 3 — Stirrer

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