BRITISH STANDARD

BS EN
12274-3:2002

Slurry surfacing — Test methods —

Part 3: Consistency

The European Standard EN 12274-3:2002 has the status of a British Standard

ICS 93.080.20

National foreword

This British Standard is the official English language version of EN 12274-3:2002.

The UK participation in its preparation was entrusted by Technical Committee B/510, Road materials, to Subcommittee B/510/2, Surface dressing, sprays and slurry surfacing, which has the responsibility to:

— aid enquirers to understand the text;

— present to the responsible 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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This British Standard, having been prepared under the direction of the Building and Civil Engineering Sector Policy and Strategy Committee, was published under the authority of the Standards Policy and Strategy Committee on 5 February 2002

Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 7 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

ISBN 0 580 39003 9

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 12274-3

January 2002

ICS 93.080.20

English version

Slurry surfacing - Test methods - Part 3: Consistency

Matériaux bitumineux coulés à froid - Méthodes d'essai - Partie 3: Consistance

Dünne Asphaltschicht in Kaltbauweise - Prüfverfahren - Teil 3: Konsistenz

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Ref. No. EN 12274-3:2002 E

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Foreword

This European Standard 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of an identical text or by endorsement, at the latest by July 2002, and conflicting national standards shall be withdrawn at the latest by June 2004.

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

EN 12274-1, *Slurry surfacing – Test methods – Part 1: Sampling for binder extraction*

EN 12274-2, *Slurry surfacing – Test methods – Part 2: Determination of residual binder content*

EN 12274-3, *Slurry surfacing – Test methods – Part 3: Consistency*

EN 12274-4, *Slurry surfacing – Test methods – Part 4: Determination of cohesion of the mix*

EN 12274-5, *Slurry surfacing – Test methods – Part 5: Determination of wearing*

EN 12274-6, *Slurry surfacing – Test methods – Part 6: Rate of application*

EN 12274-7, *Slurry surfacing – Test methods – Part 7: Shaking abrasion test in suitability of mineral aggregates to slurry mixes*[1]

EN 12274-8, *Slurry surfacing – Test methods – Part 8: Visual assessment*[1]

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, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

[1] In preparation.

1 Scope

This European Standard specifies a test method for determining a consistency of slurry surfacing mixtures.

NOTE 1 The method can be used as a mix design aid to determine the amount of water required to form a stable, workable mixture.

NOTE 2 To obtain the correct consistency, it can be necessary to repeat the test with different known percentages of water.

This European Standard applies to slurry surfacings for roads, airfields and other trafficked areas.

2 Apparatus

2.1 Mould, made from sheet metal or hard plastic, in the form of a frustum of a cone (see Figure 1), of height (75 ± 1) mm, diameter at the top of (40 ± 1) mm, and a diameter at the bottom of (90 ± 1) mm.

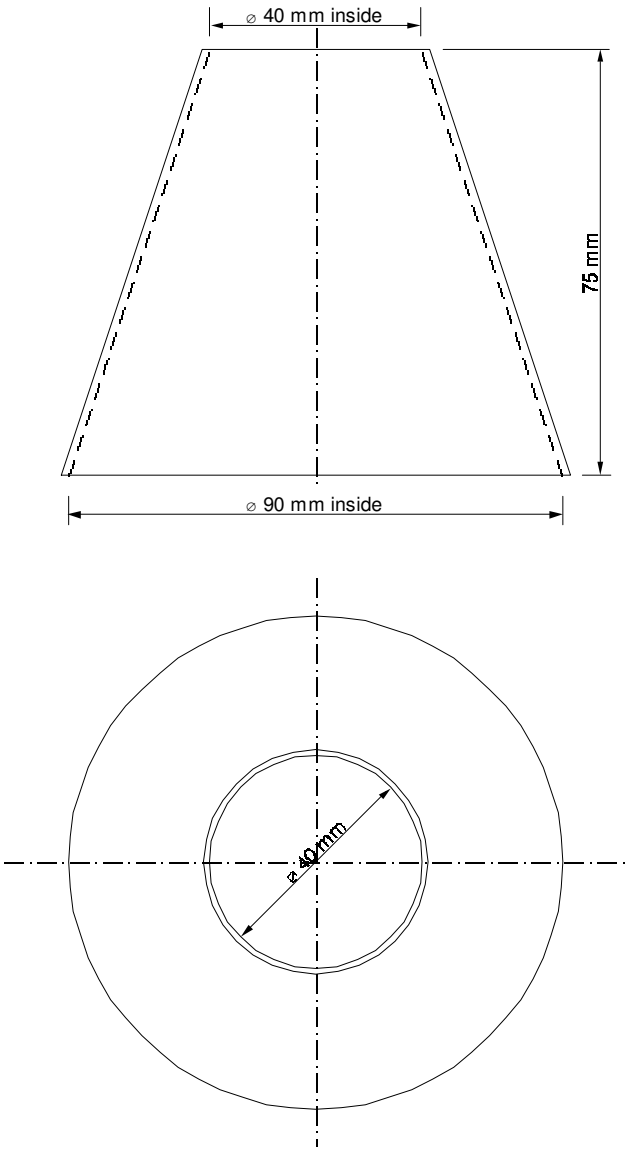

Figure 1 — Mould

2.2 Measuring sheet, of non-absorbent paper, 250 mm × 250 mm, marked with an indelible flow scale of eight concentric circles, as shown in Figure 2, each increasing in radius by 10 mm. The inner circle shall have a diameter of 90 mm. The circles may be scribed with a compass but the lines shall not be thicker than 0,5 mm. All dimensions shall be to a limit deviation of ± 1 mm.

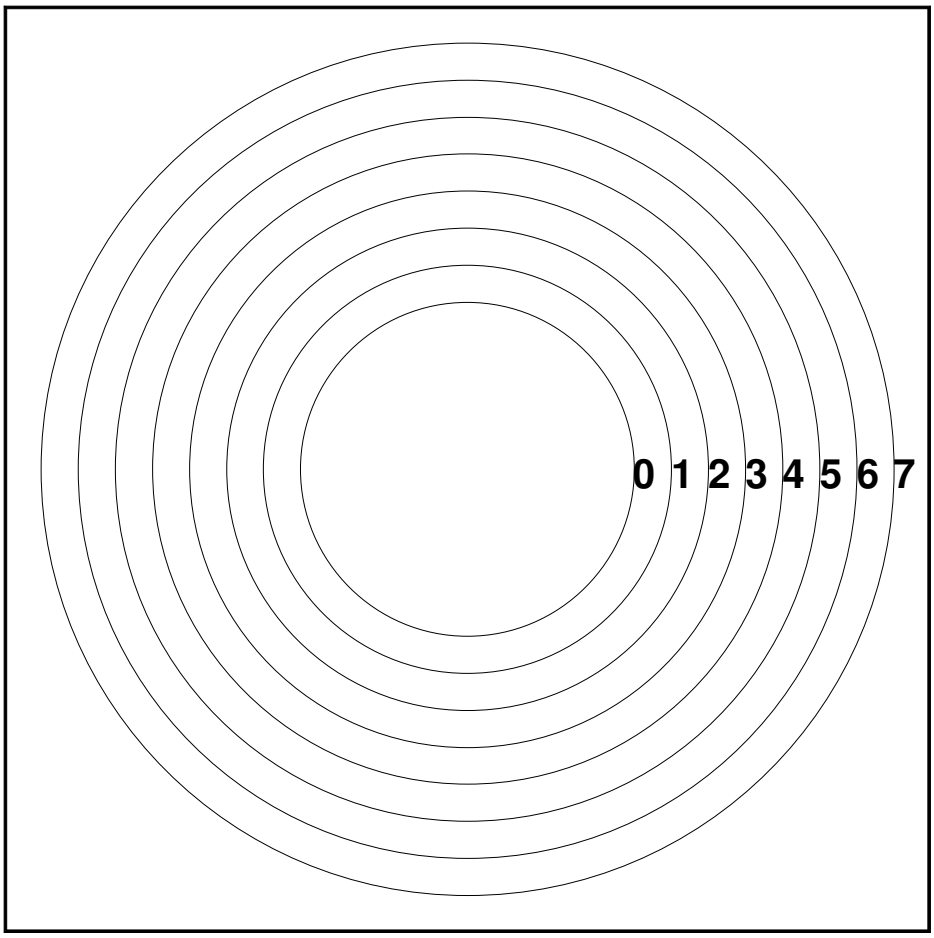

Figure 2 — Flow Scale (shown half-full size)

2.3 Balance, readable to 0,1 g and capable of weighing 2 000 g.

2.4 Beaker of at least 500 ml capacity.

2.5 Stirring rod.

2.6 Oven, capable of containing the sample and maintaining its temperature at (110 ± 5) °C.

3 Procedure

3.1 Use wet or dry aggregates. In the latter case, dry a sufficient amount of aggregates and filler in the oven at a temperature of (110 ± 5) °C until constant mass is achieved.

3.2 Manually homogenise the bitumen emulsion.

3.3 The test temperature shall be the ambient temperature.

3.4 Weigh a sample of (400 ± 5) g of aggregate and place in the beaker. Weigh and add any filler needed in the mixture (cement or hydrated lime). Add any predetermined quantities of additives and pre-wetting water and record the amount of components in grams (limit deviation: ± 1 g).

3.5 Add the selected amount of bitumen emulsion to the other mixture components in the beaker and use the stirring rod to mix until the emulsion has broken and the mix is homogenous.

3.6 Place the non-absorbent paper flow sheet on a level table. Place the mould with its base centred on the flow sheet. Fill the mould with the slurry mixture, strike the top surface level with the top of the cone using a spatula and immediately lift the mould clear of the mixture with a smooth vertical motion.

3.7 Allow the slurry mixture previously supported by the mould to flow and record the measurements after at least 10 s.

4 Expression of results

The outflow of the slurry is measured at four points 90° apart from the circle "0", averaged and recorded as

... mm flow and ... % by mass of pre-wetting water.

5 Test report

The test report shall include:

a) statement that the test has been performed in accordance with this European Standard;

b) type and size of aggregates used; report, of dry or wet aggregates have been used and report the water content, if wet aggregates have been used;

c) type and percentage by mass of filler used;

d) type and percentage by mass of additives used;

e) type and percentage by mass of emulsion used;

f) date of test;

g) ambient temperature;

h) location of the test;

i) name of person conducting test;

j) results as calculated in clause 4;

k) remarks;

l) signature of person conducting test.

Bibliography

[1] ISSA Technical bulletin No. 106 (1990)

[2] ASTM D 3910 - 90

[3] Normas España NLT-317/87

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