



SLOVENSKI STANDARD

SIST EN 12274-7:2005

01-julij-2005

Obnovitev površine z emulzijo – 7. del: Preskus obrabe s tresenjem

Slurry surfacing - Test methods - Part 7: Shaking abrasion test

Dünne Asphaltsschichten in Kaltbauweise - Prüfverfahren - Teil 7: Schüttel-Abriebprüfung

Matériaux bitumineux coulés à froid - Méthodes d'essai - Partie 7 : Essai d'abrasion par agitation

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ICS:

93.080.20 Materiali za gradnjo cest Road construction materials

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en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 12274-7

May 2005

ICS 93.080.20

English version

Slurry surfacing - Part 7: Shaking abrasion test

Matériaux bitumineux coulés à froid - Partie 7 : Essai
d'abrasion par agitation

Dünne Asphaltsschichten in Kaltbauweise - Teil 7: Schüttel-
Abriebprüfung

This European Standard was approved by CEN on 17 April 2005.

CEN members are bound to comply with the CEN/CENELEC 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of 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.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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Foreword

This document (EN 12274-7:2005) 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of an identical text or by endorsement, at the latest by November 2005, and conflicting national standards shall be withdrawn at the latest by December 2005.

This document describes a test method for determining the suitability and compatibility of aggregates and emulsions for slurry surfacings.

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.*

prEN 12274-8, *Slurry surfacing – Test methods – Part 8: Visual assessment.*

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.

EN 12274-7:2005 (E)**1 Scope**

This document specifies a test method for determining the suitability of aggregates and cationic emulsions for slurry surfacings and, where appropriate, the effect of individual additives.

This document applies to slurry surfacings.

NOTE 1 The procedure uses a standardized mix composition but the method may also be used to assess the effect of variations in the grading and binder content but this use is not part of the standard.

NOTE 2 Additives affecting the breaking behaviour may also be tested under standardised conditions. The test may also be used to study the effect of a particular type of bitumen or emulsifier.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 12697-6:2003, *Bituminous mixtures — Test methods for hot mix asphalt — Part 6: Determination of bulk density of bituminous specimens*

3 Principle

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The shaking abrasion test determines the water sensitivity of mixes for slurry surfacings consisting of 0/2 mm aggregate and cationic emulsion for slurry surfacing.

The test measures the loss of material from standard specimens when cylinders of compacted material are placed in water filled cylinders which are rotated end over end in a suitable device.

The test uses mixtures for slurry surfacing using the materials to be used for producing slurry surfacing but made to a standard grading and binder content prepared at room temperature.

Four 25 mm high cylindrical specimens each with a diameter of 30 mm and prepared using a standardized mix for slurry surfacing are tested in each set of tests. The specimens are statically compacted and then conditioned by storage in water in a vacuum prior to testing.

4 Materials and equipment

- 4.1 Plastic, glass or porcelain containers with capacities of approximately 0,5 l.
- 4.2 Stirring spatula (or metal fork).
- 4.3 Balance accurate to $\pm 0,1$ g.
- 4.4 Warm air dryer.
- 4.5 Compaction moulds with bedplates (at least 4 are required for each test) (see Figure 1).
- 4.6 Compaction plugs, one for each compaction mould (see Figure 2).
- 4.7 Funnel (see Figure 3).

4.8 Press with a load range of 10 kN and an advance speed of 20 mm/min.

4.9 Shaking device (see Figure 4).

4.10 Shaking cylinders (see Figure 5).

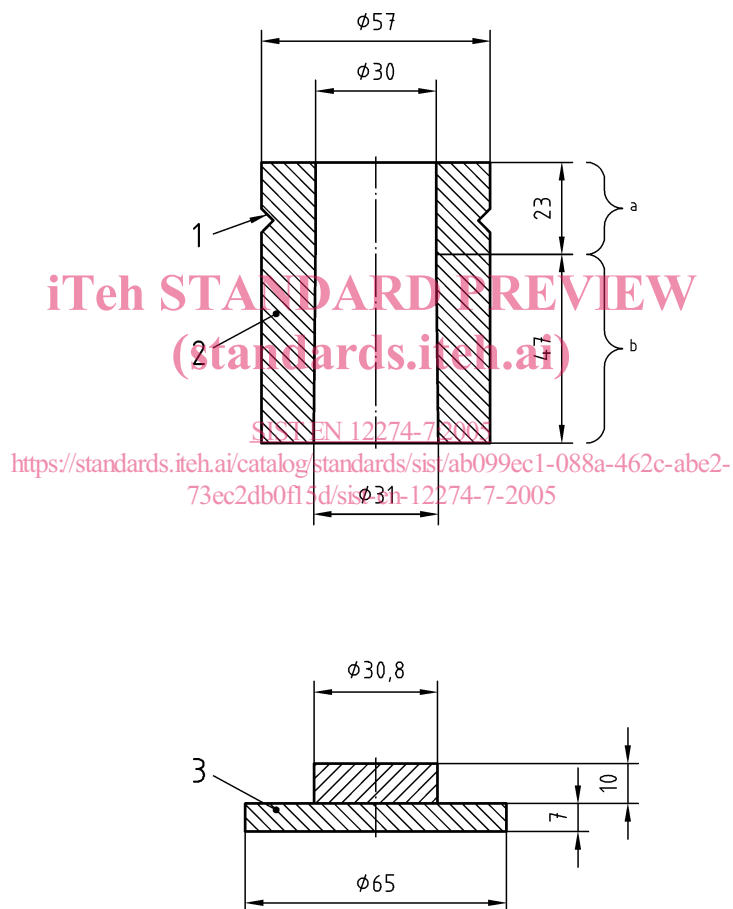
4.11 Vacuum desiccator

4.12 Vacuum gauge accurate to 0,1 kPa.

4.13 Chamois leather cloths

NOTE Information on accuracy and calibration of equipment may be found in EN 12697-38.

Dimensions in millimetres

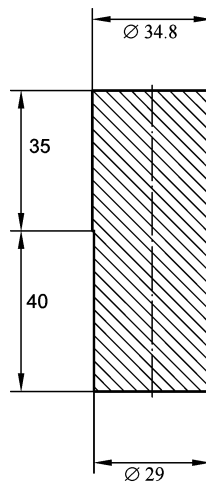


Key

- 1 Marking to show direction of filling
- 2 Compaction mould
- a Drilling, \varnothing 30
- b Conical widening from \varnothing 30 to \varnothing 31
- 3 Bed plate

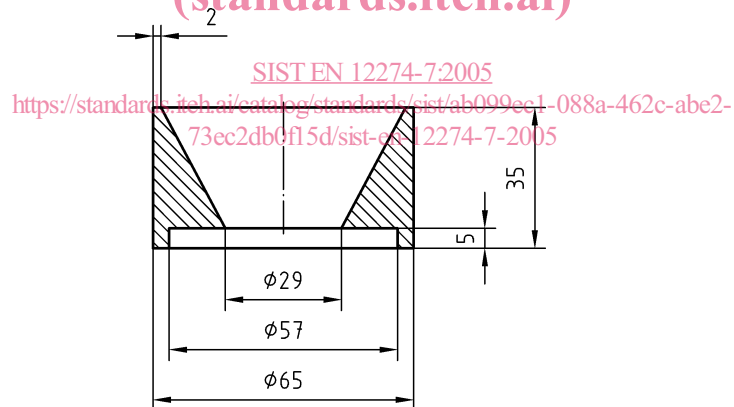
Figure 1 — Compaction mould (tolerances $\pm 0,1$)

Dimensions in millimetres

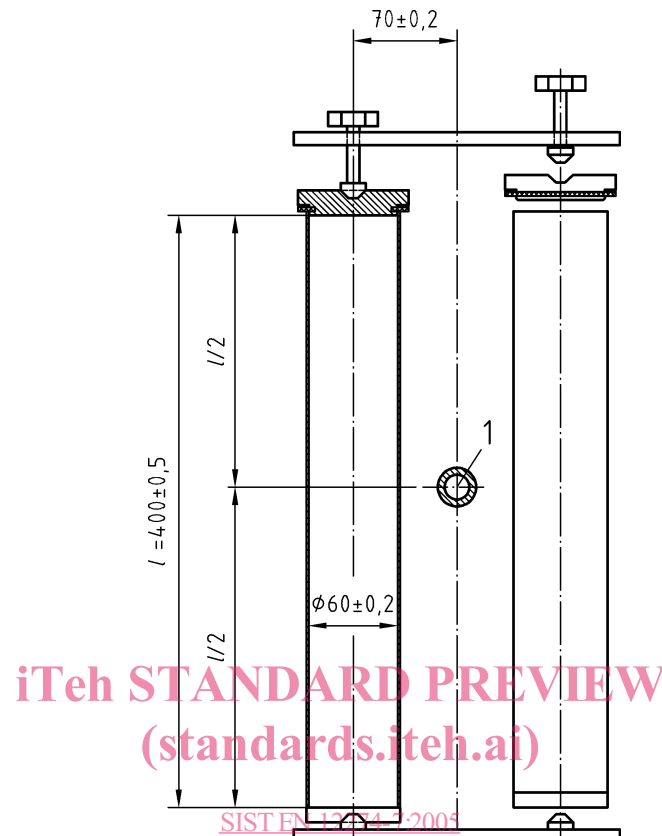
Figure 2 — Compaction mould plug (tolerances $\pm 0,1$)

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Dimensions in millimetres

Figure 3 — Example for a funnel for filling the mould (many other designs are suitable) (tolerances $\pm 0,1$)

Dimensions in millimetres

**Key**

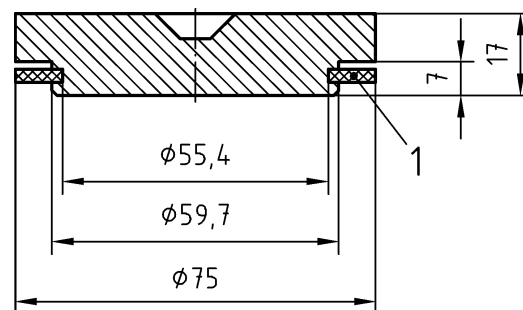
- 1 Axis of rotation

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Figure 4 — General view of cylinder construction

NOTE The cylinder will be replaced when the diameter has worn to 61,0 mm.

Dimensions in millimetres

**Key**

- 1 Rubber gasket

Figure 5 — Cylinder cap (tolerances $\pm 0,1$)