



SLOVENSKI STANDARD

SIST EN 12274-3:2018

01-maj-2018

Nadomešča:

SIST EN 12274-3:2002

**Tankoplastne prevleke po hladnem postopku - Preskusne metode - 3. del:
Konsistenca**

Slurry surfacing - Test methods - Part 3: Consistency

Dünne Asphaltschicht in Kaltbauweise - Prüfverfahren - Teil 3: Konsistenz

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Ta slovenski standard je istoveten z: EN 12274-3:2018
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ICS:

93.080.20 Materiali za gradnjo cest Road construction materials

SIST EN 12274-3:2018

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 12274-3

March 2018

ICS 93.080.20

Supersedes EN 12274-3:2002

English Version

Slurry surfacing - Test methods - Part 3: Consistency

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

Dünne Asphaltdeckschichten in Kaltbauweise -
Prüfverfahren - Teil 3: Konsistenz von
Bitumenschlämmen

This European Standard was approved by CEN on 13 November 2017.

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 CEN-CENELEC 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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

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European foreword

This document (EN 12274-3:2018) 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 September 2018, and conflicting national standards shall be withdrawn at the latest by September 2018.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 12274-3:2002.

Compared with EN 12274-3:2002, the following changes have been made:

- a) The title is changed from “Slurry Seal” to “Slurry Surfacing” an editorial error.
- b) The requirement for the slurry surfacing to be broken in 3.5 has been removed as this was a technical error.

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

- EN 12274-1, *Slurry surfacing — Test methods — Part 1: Sampling of slurry surfacing mixture*
- EN 12274-2, *Slurry surfacing — Test methods — Part 2: Determination of residual binder content including preparation of samples*
- 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 the minimum binder content and wearing resistance*
- EN 12274-6, *Slurry surfacing — Test methods — Part 6: Rate of application*
- EN 12274-7, *Slurry surfacing — Test methods — Part 7: Shaking abrasion test*
- EN 12274-8, *Slurry surfacing — Test methods — Part 8: Visual assessment of defects*

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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1 Scope

This European Standard specifies a test method for determining the consistency of slurry surfacing mixtures. This test is dedicated to Slurry Seals ($D \leq 4\text{ mm}$).

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 surfacing for roads, airfields and other trafficked areas.

2 Normative references

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

EN 1097-5, *Tests for mechanical and physical properties of aggregates - Part 5: Determination of the water content by drying in a ventilated oven*

3 Apparatus

- 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, inside diameter at the top of (40 ± 1) mm, and an inside diameter at the bottom of (90 ± 1) mm.

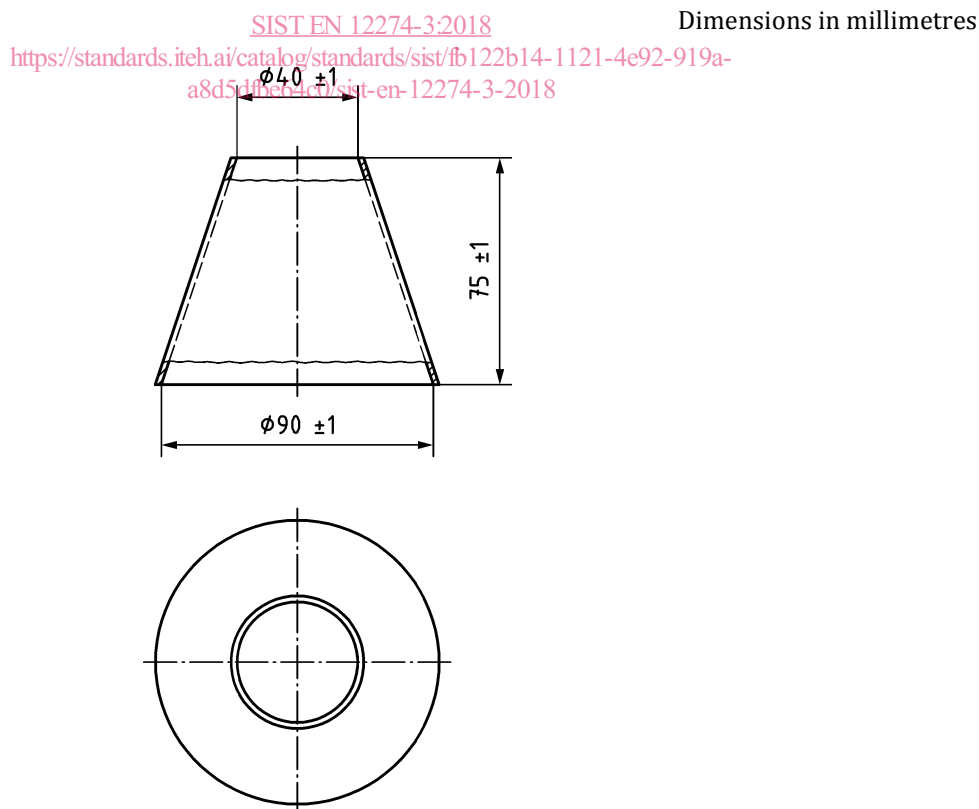


Figure 1 — Mould

- 2) Measured metallic template, 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. On the plate sheets of non-absorbent transparent paper are used to spread the slurry mix and to determine the slurry flow.

Dimensions in millimeters

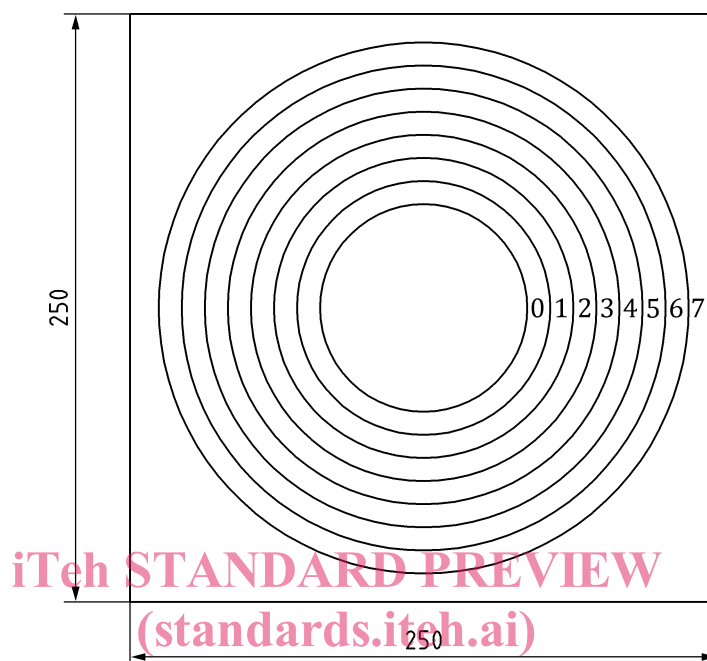


Figure 2 — Flow scale
<https://standards.itech.ai/catalog/standards/sist/b122b14-1121-4e92-919a-a8d5dfbe64c0/sist-en-12274-3-2018>

- 3) Balance having a suitable range capable of weighting a sample to the nearest 0,1 g.
- 4) Beaker or container of at least 0,5 L capacity.
- 5) Stirring rod.
- 6) Oven, capable of accommodating the sample and maintaining a temperature of $(110 \pm 5) ^\circ\text{C}$.

4 Procedure

- 1) Wet aggregates may be used, preferably at their own natural moisture or dry. In case of natural moisture, determine the water content W by drying in an oven at a temperature of $(110 \pm 5) ^\circ\text{C}$ until constant mass is achieved, according to EN 1097-5.
- 2) To homogenize the bitumen emulsion, stir it manually.
- 3) The test temperature shall be at ambient temperature, $(23 \pm 5) ^\circ\text{C}$.
- 4) Weigh a sample of (400 ± 5) g of dry aggregate or $(400 \times (100+W)/100 \pm 5)$ g of wet aggregates (where W is the water content of aggregates) and place it in the beaker or container. Weigh and add any reactive filler needed in the mixture (e.g. cement or hydrated lime). Add any predetermined quantities of additives and pre-wetting water and record the amount of components in grams (accuracy: ± 1 g).

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- 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 mix is homogeneous.
- 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.
- 7) Allow the slurry mixture previously supported by the mould to flow and record the measurements after (10 ± 2) s.

5 Expression of results

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

- slurry flow, in mm;
- pre-wetting water, in % by mass;
- bitumen emulsion in the mix, in % by mass.

6 Test report

The test report shall include:

- a) reference to this European Standard;
- b) any deviation from the procedure described in the standard;
- c) reference of the sample;
- d) date of test;
- e) test temperature at which the test has been performed;
- f) name of person conducting test;
- g) results as stated in Clause 5 Expression of Results;
- h) remarks.

7 Precision

The statistical parameters for the repeatability and reproducibility for this test are unknown.

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