

Slurry surfacing - Test method - Part 5: Determination
of the minimum binder content and wearing resistance

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 12274-5:2018 sisaldab Euroopa standardi EN 12274-5:2018 ingliskeelset teksti.	This Estonian standard EVS-EN 12274-5:2018 consists of the English text of the European standard EN 12274-5:2018.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 14.03.2018.	Date of Availability of the European standard is 14.03.2018.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 93.080.20

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:
Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

English Version

Slurry surfacing - Test method - Part 5: Determination of the minimum binder content and wearing resistance

Matériaux bitumineux coulés à froid - Méthode d'essai
- Partie 5: Détermination de la teneur minimum en
liant et de la résistance à l'usure

Dünne Asphaltdeckschichten in Kaltbauweise -
Prüfverfahren - Teil 5: Bestimmung des
Mindestbindemittelgehaltes und des Verschleißes 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.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents

Page

European foreword.....	3
1 Scope.....	4
2 Normative references.....	4
3 Terms and definitions	4
4 Principle	4
5 Materials.....	5
5.1 Coarse aggregates and fine aggregates	5
5.2 Reactive filler.....	5
5.3 Emulsion.....	5
6 Apparatus.....	5
6.1 Apparatus used for preparation of samples.....	5
6.2 Apparatus used for testing.....	6
7 Preparation of sample	9
7.1 Conditioning temperature	9
7.2 Water addition	10
7.3 Aggregates and reactive filler	10
7.4 Water and additive	10
7.5 Emulsion.....	10
7.6 Sample size	10
7.7 Curing	11
8 Test procedure	11
9 Expression of results.....	12
9.1 Test sample mass	12
9.2 Conversion factor	12
9.3 Test result.....	12
10 Test report.....	12
11 Precision.....	12
Annex A (informative) Minimum amount of emulsion for slurry surfacing with a given aggregate composition to withstand the abrasive action of traffic	13
Annex B (informative) Resistance to wear of the mix at early stage under different traffic and climatic conditions.....	14
B.1 General.....	14
B.2 Curing	14
B.3 Test procedure for determining the resistance to wear	14

European foreword

This document (EN 12274-5:2018) 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 12274-5:2003.

Compared with EN 12274-5:2003, the following changes have been made:

- a) In 6.1 the humidity is reduced from 100 % to 60 %;
- b) In 6.2 the Abrasion machine is defined in terms of rotating speed and force applied.

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.

1 Scope

This European Standard specifies a test method for the design of slurry surfacing mixture based on the determination of the minimum binder content of the mixture and the resistance to wear under wet track abrasion conditions for the purpose to support the mixture design.

This test can be used for quality control purposes.

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*

ISO 48, *Rubber, vulcanized or thermoplastic — Determination of hardness (hardness between 10 IRHD and 100 IRHD)*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

set

end of the non-reversible process when the emulsion coalescence takes place

Note 1 to entry: The coalescence of an emulsion is the non-reversible phase starting from the beginning of the breaking of the emulsion to the total setting when the bitumen emulsion reverts to bitumen in presence of a mineral.

Note 2 to entry: After the set of a slurry surfacing: it is not possible to stir the mixture; free emulsion during washing with water cannot be observed and an absorbent paper is not stained when pressed slightly onto the surface of the slurry surfacing.

3.2

set time

time elapsed between placing a slurry surfacing and its setting

3.3

quick setting slurry surfacing

slurry with a set time less than or equal to 30 min

3.4

slow setting slurry surfacing

slurry with a set time more than 30 min

4 Principle

The samples are tested under water, after which the mass-loss by abrasion is measured.

The test consists of an abrasive action operated by means of a hard rubber cylinder which exerts a planetary side gear rubbing pressure, applied for 5 min, on the surface of a test sample of slurry previously prepared, cured in an oven, and moistened by immersion.