

PINDAMINE. KATSEMEETODID. OSA 3: SIDEAINE JA
TÄITEMATERJALI NAKKUVUSE MÄÄRAMINE
VIALIT-PLAADI LÖÖKKATSEGA

Surface dressing - Test methods - Part 3:
Determination of binder aggregate adhesivity by the
Vialit plate shock test method

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>See Eesti standard EVS-EN 12272-3:2025 sisaldab Euroopa standardi EN 12272-3:2025 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 05.11.2025.</p> <p>Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.</p>	<p>This Estonian standard EVS-EN 12272-3:2025 consists of the English text of the European standard EN 12272-3:2025.</p> <p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 05.11.2025.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
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EUROPEAN STANDARD

EN 12272-3

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English Version

Surface dressing - Test methods - Part 3: Determination of binder aggregate adhesivity by the Vialit plate shock test method

Enduits superficiels - Méthode d'essai - Partie 3:
Détermination de l'adhésivité liants-granulats par
mesure de la cohésion Vialit

Oberflächenbehandlung - Prüfverfahren - Teil 3:
Bestimmung des Adhäsionsvermögens von Bindemittel
und Gesteinskörnung mit dem Schlagprüfverfahren

This European Standard was approved by CEN on 4 August 2025.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 12272-3:2025) has been prepared by Technical Committee CEN/TC 227 “Road materials”, the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by May 2026, and conflicting national standards shall be withdrawn at the latest by May 2026.

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 12272-3:2003.

EN 12272-3:2025 includes the following significant technical changes with respect to EN 12272-3:2003:

- the possible use of 2/4 mm aggregates;
- the new notion of Vialit emulsion adhesivity and the procedure related to its measurement;
- precision of different operating procedures:
 - dosages when using 2/6 mm aggregates;
 - time to temperature settings;
 - curing time during the implementation of the test when using emulsion.

This document is one of a series of standards as listed below:

- EN 12272-1, *Surface dressing — Test methods — Part 1: Rate of spread and accuracy of spread of binder and chippings*
- EN 12272-2, *Surface dressing — Test methods — Part 2: Visual assessment of defects*
- EN 12272-3, *Surface dressing — Test methods — Part 3: Determination of binder aggregate adhesivity by the Vialit plate shock test method*

Annexes A, B, C and D are informative.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Introduction

The adhesion between binder and chippings is the basis of successful surface dressing. It is important that this bond can be obtained, initially, at the moment of construction and be ensured in cool conditions when the adhesivity problems become dominant for binder with damp or dry and dusty chippings. A knowledge of adhesivity enables the choice of a binder and aggregate type for minimum risk, especially for early and late season work. The purpose of the test is also developed on Annex D.

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1 Scope

This document specifies, for anhydrous bituminous binder (cut-back and fluxed bituminous binders), the measurement of the binder aggregate adhesivity and the influence of adhesion agents or interfacial dopes on adhesion characteristics. This is to help designing binder aggregate systems for surface dressing.

This document specifies methods of measurement of:

- the mechanical adhesion of the binder to the surface of the aggregate;
- the active adhesivity of the binder to the chippings;
- the improvement of the mechanical adhesion and active adhesivity by adding an adhesion agent either into the mass of the binder or by spraying the interface between binder and chippings;
- the wetting temperature of the binder to the aggregate;
- the variation of adhesivity below the fragility temperature.

The wetting capacity of the binder affects the adhesivity properties. With the presence of water, the wetting capacity of bitumen emulsion is naturally high. Even if mechanical adhesion and active adhesivity test methods are mainly dedicated to anhydrous bituminous binders (cut-back and fluxed bituminous binders), these measurements can also be practiced with bitumen emulsion with a personalized interpretation of the results that depends on the design of the binder aggregate system. For bitumen emulsion, the adhesivity is conventionally measured through the water immersion test (EN 13614).

This test method is applicable to:

- bituminous binders used for surface dressings (e.g. conventional or polymer modified binders; mainly anhydrous bituminous binders such as cut-back and fluxed bituminous binders and bitumen emulsions);
- all the following aggregates sizes that can be used for surface dressings:
 - set 1: 2/5 mm, 5/8 mm, 8/11 mm and 11/16 mm; and
 - set 2: 2/4 mm, 2/6 mm, 4/6 mm, 4/8 mm, 6/10 mm, 6/12 mm and 10/14 mm.

This test method does not apply to quality control on site.

NOTE Further information concerning the purpose of the test can be found in Annex D.

WARNING – The use of this document can involve hazardous operations. This document does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this document to establish appropriate safety practices and determine the applicability of regulatory limitations prior to use.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

ISO 48-2, *Rubber, vulcanized or thermoplastic — Determination of hardness — Part 2: Hardness between 10 IRHD and 100 IRHD*