

Bituminous mixtures - Test methods - Part 41:
Resistance to de-icing fluids

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 12697-41:2023 sisaldab Euroopa standardi EN 12697-41:2023 ingliskeelset teksti.	This Estonian standard EVS-EN 12697-41:2023 consists of the English text of the European standard EN 12697-41:2023.
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English Version

Bituminous mixtures - Test methods - Part 41: Resistance to de-icing fluids

Mélanges bitumineux - Méthodes - Partie 41 :
Résistance aux agents déverglaçants

Asphalt - Prüfverfahren - Teil 41: Widerstand gegen
chemische Auftaumittel

This European Standard was approved by CEN on 18 December 2022.

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European foreword

This document (EN 12697-41:2023) 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of an identical text or by endorsement, at the latest by July 2023, and conflicting national standards shall be withdrawn at the latest by July 2023.

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 12697-41:2013.

EN 12697-41:2023 includes the following significant technical changes with respect to EN 12697-41:2013:

- the title no longer refers to hot mix asphalt;
- [1] examples of de-icing fluids deleted in the Scope;
- [3.1] definition clarified;
- [7.2] completion of recommendation to prepare additional specimens in case of divergence of results;
- [7.4] clarified description for drilling and sawing of test specimen;
- [7.5] NOTE deleted;
- [8.1.3] NOTE amended to normal text;
- [8.1.5] tolerance for storing amended to $70\text{ d} \pm 1\text{ d}$;
- [8.2.1] 2nd paragraph of NOTE amended to normal text;
- [9.3 and 9.5] NOTE deleted; reworded to normal text and placed in 7.2;
- [10] density and pH-value reporting deleted;
- [10] example of de-icing fluid “(e.g. potassium acetate)” deleted.

A list of all parts in the EN 12697 series can be found on the CEN website.

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.

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1 Scope

This document specifies a test method to determine the resistance of bituminous materials to de-icing fluids. The procedure determines the surface tensile strength of a specimen of asphalt which has been stored in de-icing fluid.

This document is primarily used as a test on asphalt to be laid on airfields, but it can be used for asphalt to be laid on roads or other paved areas.

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.

EN 12697-6, *Bituminous mixtures — Test methods — Part 6: Determination of bulk density of bituminous specimens*

EN 12697-27, *Bituminous mixtures — Test methods — Part 27: Sampling*

EN 12697-30, *Bituminous mixtures — Test methods — Part 30: Specimen preparation by impact compactor*

EN 12697-31, *Bituminous mixtures — Test methods — Part 31: Specimen preparation by gyratory compactor*

EN 12697-32, *Bituminous mixtures — Test methods — Part 32: Specimen preparation by vibratory compactor*

EN 12697-33, *Bituminous mixtures — Test method — Part 33: Specimen prepared by roller compactor*

EN 12697-35, *Bituminous mixtures — Test methods — Part 35: Laboratory mixing*

3 Terms and definitions

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

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

surface tensile strength

tensile stress at maximum force when testing according to this test method

4 Principle

Testing is performed on a sawn cylindrical specimen of asphalt on which a well-defined test surface has been drilled out in the bituminous mixture to a depth of about 5 mm. A steel plate is bonded to the test surface of each specimen in turn. Four specimens are stored and four are not stored in a de-icing fluid. During testing, the plate is pulled off with a tensile force increasing at a rate of 200 N/s, the force being applied perpendicular to the test specimen surface. The tensile force at failure load and the mode of failure are recorded. The results are compared with those for specimens which have not been stored in de-icing fluid.