BS EN 12697-22:2020+A1:2023

BSI Standards Publication

Bituminous mixtures — Test methods

Part 22: Wheel tracking

bsi.

National foreword

This British Standard is the UK implementation of EN 12697-22:2020+A1:2023. It supersedes BS EN 12697-22:2020, which is withdrawn.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to CEN text carry the number of the CEN amendment. For example, text altered by CEN amendment A1 is indicated by A1 A1.

The UK participation in its preparation was entrusted to Technical Committee B/510/1, Asphalt products.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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Date	Text affected
31 January 2024	Implementation of CEN amendment A1:2023

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English Version

Bituminous mixtures - Test methods - Part 22: Wheel tracking

Mélanges bitumineux - Méthodes d'essai - Partie 22 : Essai d'orniérage

Asphalt - Prüfverfahren - Teil 22: Spurbildungstest

This European Standard was approved by CEN on 18 November 2019 and includes Amendment approved by CEN on 20 November 2023.

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

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

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European foreword

This document (EN 12697-22:2020+A1:2023) 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of an identical text or by endorsement, at the latest by June 2024, and conflicting national standards shall be withdrawn at the latest by June 2024.

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 ▌A1⟩ EN 12697-22:2020 ⟨A1▌.

This document includes Amendment 1 approved by CEN on 20 November 2023.

The start and finish of text introduced or altered by amendment is indicated in the text by tags ▌A1⟩ ⟨A1▌.

The following is a list of significant technical changes since the previous edition:

— the title no longer makes the method exclusively for hot mix asphalt;

— [Clause 2] ISO 48, Rubber, vulcanized or thermoplastic — Determination of hardness (hardness between 10 IRHD and 100 IRHD), replaced by: ISO 48-2, Rubber, vulcanized or thermoplastic — Determination of hardness — Part 2: Hardness between 10 IRHD and 100 IRHD; ISO 7619, Rubber, vulcanized or thermoplastic — Determination of indentation hardness, replaced by: ISO 48-5, Rubber, vulcanized or thermoplastic — Determination of hardness — Part 5: Indentation hardness by IRHD pocket meter method;

— [3.5] Table 1 deleted;

— [Clause 4] symbols for properties in the different methods made more consistent and corrected through the whole document. Table 2 replaced by new Table 1;

— [Clause 6] moulds added to the list of equipment. Modifications for clarity;

— [6.3.1.2] ISO 7619 and ISO 48 replaced by: ISO 48-5 and 48-2;

— [7.1] new clause added and the order of clauses changed;

— [7.2.1.1] vibratory compactor excluded as a method of sample preparation;

— [7.2.1.2] thickness for mixtures with upper sieve size larger than 22 changed to 80 mm;

— [7.5.1] the text has been modified for clarity. “Plaster of Paris” amended to holding medium;

— [7.6] storage time amended to max 42 days and requirement added for storing samples on a flat surface;

— [8.1.7] deleted;

— [9.2.1] Formula (2) corrected;

— [9.3.1.2] Formula (7) corrected;

— [9.3.2.2] required rounding of WTS_{AIR} values specified;

— [9.3.3.2] required rounding of WTS_{W} values specified;

— [10.1.2] type of roller compactor required to be reported;

— [11.4] precision data for small device, procedure B (air) added;

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

〚A1〉 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. 〈A1〛

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.

1 Scope

This document describes test methods for determining the susceptibility of bituminous materials to deform under load. The test is applicable to mixtures with upper sieve size less than or equal to 32 mm.

The tests are applicable to specimens prepared from asphalt mixtures that have either been manufactured in a laboratory or cut from a pavement; test specimens are held in a mould with their surface flush with the upper edge of the mould.

〈A1〉 The susceptibility of bituminous materials to deform is assessed by the rut formed by repeated passes of a loaded wheel at constant temperature. Three alternative types of devices can be used according to this document: large size devices, extra-large size devices and small size devices. With large size devices and extra-large size devices, the specimens are conditioned in air during testing. With small size devices, specimens are conditioned, in either air or water.

NOTE Large size and extra-large size devices are not suitable for use with cylindrical cores. 〈A1〉

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 12697-7, *Bituminous mixtures — Test methods for hot mix asphalt — Part 7: Determination of bulk density of bituminous specimens by gamma rays*

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

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*

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

ISO 48-5, *Rubber, vulcanized or thermoplastic — Determination of hardness — Part 5: Indentation hardness by IRHD pocket meter method*

3 Terms and definitions

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

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

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at https://www.iso.org/obp

3.1
nominal thickness
for laboratory prepared specimens, the target thickness, in millimetres, to which the specimens are to be prepared

Note 1 to entry: The target thickness is the required thickness that is targeted when making the specimen.