

STN	<p style="text-align: center;">Asfaltové zmesi Skúšobné metódy Časť 20: Zatláčanie trňa na kocke alebo na Marshallových skúšobných telesách</p>	<p style="text-align: center;">STN EN 12697-20</p>
		73 6160

Bituminous mixtures - Test methods - Part 20: Indentation using cube or Marshall specimens

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola označená vo Vestníku ÚNMS SR č. 07/20

Obsahuje: EN 12697-20:2020

Oznámením tejto normy sa ruší
STN EN 12697-20 (73 6160) z októbra 2012

130760

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 12697-20

February 2020

ICS 93.080.20

Supersedes EN 12697-20:2012

English Version

**Bituminous mixtures - Test methods - Part 20: Indentation
using cube or Marshall specimens**

Mélanges bitumineux - Méthodes d'essai - Partie 20 :
Essai d'indentation de cubes ou éprouvettes Marshall

Asphalt - Prüfverfahren - Teil 20: Eindringversuch an
Würfeln oder Marshall-Probekörpern

This European Standard was approved by CEN on 18 November 2019.

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, 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, 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.....	5
2 Normative references.....	5
3 Terms and definitions	5
4 Apparatus.....	5
4.1 Moulding of test cubes of mastic asphalt.....	5
4.2 Indentation test apparatus.....	6
4.2.1 Loading apparatus.....	6
5 Specimens	12
5.1 Specimen type	12
5.2 Number of specimens	12
5.3 Conditioning.....	12
6 Procedure.....	12
6.1 Checking.....	12
6.2 Test conditions.....	12
6.3 Cube specimen preparation	12
6.3.1 Specimen size	12
6.3.2 Preparation of mastic asphalt samples mixed in industrial scale.....	13
6.3.3 Preparation of laboratory-mixed MA	13
6.3.4 Moulding of test cubes.....	13
6.4 Cylindrical specimen preparation	13
6.5 Mounting and temperature conditioning of the specimens	13
6.6 Application of the force.....	14
7 Result.....	14
8 Precision.....	14
9 Test report.....	15
Bibliography.....	16

European foreword

This document (EN 12697-20:2020) 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 August 2020, and conflicting national standards shall be withdrawn at the latest by August 2020.

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 12697-20:2012.

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;
- [ge] editorial update according to current standard template;
- [Clause 2] references deleted to EN 13108-1, -2, -3, -4, -5 and -7 since they are not referred to, 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;
- [Clause 3] new clause: 3 Terms and definitions introduced according to ISO/IEC Directives – Part 2. Following clauses renumbered accordingly;
- for the following changes the new clause number is given within [] and the corresponding clause number in previous version is given within ();
- [4.1.8] (3.1.8) Silicone oil added as an example of release agent;
- [4.1.9] (3.1.9) Figure 1: correction of tolerances of metal mould to ($\pm 0,5$) in accordance with [4.1.1] (3.1.1);
- [4.2.1.1] (3.2.1.1) accuracy of $\pm 0,1$ mm for dial gauge introduced;
- [4.2.5] ISO 48 replaced by: ISO 48-2;
- [5.3] (4.3) two NOTES deleted;
- [6.3.1] (5.3.1) tolerance for edge and height of specimen unified to $(70,7 \pm 0,5)$ mm in accordance with [4.1.1] (3.1.1);
- [6.3.2.2] (5.3.2.2) Reference to "the temperature indicated by the producer" deleted since it is covered by EN 12697-35;
- [6.3.2.3] (5.3.2.3) Sentence regarding temperature limit of 240°C deleted. Subclause [6.3.2.3] (5.3.2.2) is referring to EN 12697-35. Corresponding NOTE deleted;
- [6.3.3] (5.3.3) Temperature restriction to 240°C deleted. Subclause is referring to EN 12697-35;

EN 12697-20:2020 (E)

- [Clause 7] (Clause 6) Instruction for the repetition of a test introduced; EN 12697-35;
- [Clause 8] (Clause 7) Paragraph with permissible difference deleted.

A list of all parts in the EN 12697 series 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, Turkey and the United Kingdom.

1 Scope

This document specifies a test method for determining the depth of indentation of mastic asphalt and other asphalt, when force is applied to them via a cylindrical indentor pin with a circular flat-ended base. This document applies to aggregates of maximum nominal size less than or equal to 16 mm.

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

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

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

EN 12970, *Mastic asphalt for waterproofing — Definitions, requirements and test methods*

EN 13108-6, *Bituminous mixtures — Material specifications — Part 6: Mastic Asphalt*

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

koniec náhľadu – text ďalej pokračuje v platenej verzii STN