

STN	Asfaltové zmesi. Požiadavky na materiály. Časť 20: Skúšanie typu.	STN EN 13108-20 73 6163
------------	--	---

Bituminous mixtures - Material specifications - Part 20: Type Testing

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

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 11/16

Obsahuje: EN 13108-20:2016

Oznámením tejto normy sa od 31.03.2018 ruší
STN EN 13108-20 (73 6163) z apríla 2007

123509

Úrad pre normalizáciu, metrológiu a skúšobníctvo SR, 2016
Podľa zákona č. 264/1999 Z. z. v znení neskorších predpisov sa môžu slovenské technické normy
rozmnžovať a rozširovať iba so súhlasom Úradu pre normalizáciu, metrológiu a skúšobníctvo SR.

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 13108-20

June 2016

ICS 93.080.20

Supersedes EN 13108-20:2006

English Version

**Bituminous mixtures - Material specifications - Part 20:
Type Testing**

Mélanges bitumineux - Spécifications pour le matériau
- Partie 20: Épreuve de formulation

Asphaltmischgut - Mischgutanforderungen - Teil 20:
Typprüfung

This European Standard was approved by CEN on 27 February 2016.

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, 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: Avenue Marnix 17, B-1000 Brussels

Contents

Page

European foreword.....	4
Introduction	6
1 Scope	7
2 Normative references	7
3 Terms and definitions	10
4 Requirements for Type Testing	10
4.1 General.....	10
4.2 Validity	11
4.2.1 Period of validity	11
4.2.2 Changes in aggregate	11
4.2.3 Change in bitumen	11
4.2.4 Change in Reclaimed Asphalt.....	12
4.2.5 Change in additive.....	12
5 Constituent materials	12
6 Bituminous Mixtures	12
6.1 General.....	12
6.2 Application	12
6.3 Sampling and testing.....	13
6.4 Composition	13
6.5 Specimen preparation.....	13
6.5.1 General.....	13
6.5.2 Laboratory validation.....	13
6.5.3 Production validation.....	13
7 Type Test Report	14
7.1 General.....	14
7.2 Constituents	14
7.3 Mix formulation	14
7.4 Temperatures.....	15
7.5 Test results	15
Annex A (normative) Properties and test methods for constituent materials	16
Annex B (normative) Summary of properties and test methods for bituminous mixtures.....	17
B.1 Asphalt Concrete (EN 13108-1)	17
B.2 Asphalt Concrete for Very Thin Layers, BBTM (EN 13108-2)	18
B.3 Soft Asphalt (EN 13108-3).....	19
B.4 Hot Rolled Asphalt (EN 13108-4)	19
B.5 Stone Mastic Asphalt (EN 13108-5)	20
B.6 Mastic asphalt (EN 13108-6)	21
B.7 Porous Asphalt (EN 13108-7)	21
B.8 Asphalt for Ultra-Thin Layers, AUTL (EN 13108-9)	22
Annex C (normative) Methods of specimen preparation.....	23
C.1 General.....	23

C.2	Compaction energy	23
C.3	Reference density	23
C.4	Compaction degree	24
C.5	Void content.....	24
Annex D (normative)	Test procedures and conditions.....	26
D.1	Test procedures and conditions.....	26
D.2	Bulk density, maximum density, void content, voids filled with bitumen and voids in mineral aggregate.....	26
D.3	Water sensitivity.....	26
D.4	Resistance to abrasion by studded tyres	26
D.5	Bitumen aggregate affinity for application of porous asphalt on airfields.....	26
D.6	Resistance to permanent deformation by wheel-tracking test	27
D.7	Resistance to permanent deformation by tri-axial compression test.....	27
D.8	Stiffness	28
D.9	Fatigue	29
D.10	Marshall test for application on airfields.....	29
D.11	Resistance to fuel for application on airfields.....	29
D.12	Resistance to de-icing fluid for application on airfields.....	29
D.13	Binder drainage.....	29
D.14	Indentation and resistance to permanent deformation of mastic asphalt.....	29
D.15	Permeability	30
D.16	Particle loss of porous asphalt.....	30
D.17	Mixture SATS Durability index	30
D.18	Low temperature properties.....	30
D.19	Fracture toughness (potential for crack propagation)	30
D.20	Friction after polishing (FAP)	31
Annex E (informative)	Special requirements for airfields	32

European foreword

This document (EN 13108-20:2016) 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 December 2016, and conflicting national standards shall be withdrawn at the latest by March 2018.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 13108-20:2006.

Compared with EN 13108-20:2006, the following changes have been made:

- a) update to align with other parts of EN 13108 series, test methods and CPR requirements;
- b) enhanced guidance on period of validity of Type Test Report and triggers for review;
- c) requirement for retention of technical documentation under CPR.

This European Standard is one of a series as listed below:

- EN 13108-1, *Bituminous mixtures — Material specifications — Part 1: Asphalt Concrete*
- EN 13108-2, *Bituminous mixtures — Material specifications — Part 2: Asphalt Concrete for Very Thin Layers (BBTM)*
- EN 13108-3, *Bituminous mixtures — Material specifications — Part 3: Soft Asphalt*
- EN 13108-4, *Bituminous mixtures — Material specifications — Part 4: Hot Rolled Asphalt*
- EN 13108-5, *Bituminous mixtures — Material specifications — Part 5: Stone Mastic Asphalt*
- EN 13108-6, *Bituminous mixtures — Material specifications — Part 6: Mastic Asphalt*
- EN 13108-7, *Bituminous mixtures — Material specifications — Part 7: Porous Asphalt*
- EN 13108-8, *Bituminous mixtures — Material specifications — Part 8: Reclaimed Asphalt*
- EN 13108-9, *Bituminous mixtures — Material specifications — Part 9: Asphalt for Ultra-Thin Layer (AUTL)*
- EN 13108-20, *Bituminous mixtures — Material specifications — Part 20: Type Testing*
- EN 13108-21, *Bituminous mixtures — Material specifications — Part 21: Factory Production Control*

According to the CEN/CENELEC Internal Regulations, the national standards organizations 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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

This European Standard for Type Testing has been written as part of the system for the Assessment and Verification of the Constancy of Performance (AVCP) of bituminous mixtures. It is designed to be used in conjunction with the product standards EN 13108-1 to -7 and EN 13108-9 and is called up by these standards as part of AVCP. The Type Testing procedure has the function of providing assurance that a particular mix formulation complies with requirements in the product standard. The Type Testing procedure is designed to be applied to all harmonized elements of harmonized European Standards for bituminous mixtures whether or not regulatory marking is to be applied. The system can also be extended to non-harmonized elements.

NOTE Products CE marked in accordance with appropriate harmonized European Standards might be presumed to have the performances stated with the CE marking. It is the responsibility of the manufacturer, under Factory Production Control, to ensure that the bituminous mixture continues to be produced in accordance with the declared mix formulation.

1 Scope

This European Standard specifies the Type Testing procedure for use in Assessment and Verification of the Constancy of Performance (AVCP) of bituminous mixtures for use in roads, airfields and other trafficked areas.

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 932-3, *Tests for general properties of aggregates — Part 3: Procedure and terminology for simplified petrographic description*

EN 933-1, *Tests for geometrical properties of aggregates — Part 1: Determination of particle size distribution - Sieving method*

EN 933-10, *Tests for geometrical properties of aggregates — Part 10: Assessment of fines - Grading of filler aggregates (air jet sieving)*

EN 1097-6:2013, *Tests for mechanical and physical properties of aggregates — Part 6: Determination of particle density and water absorption*

EN 1097-7, *Tests for mechanical and physical properties of aggregates — Part 7: Determination of the particle density of filler — Pycnometer method*

EN 1426, *Bitumen and bituminous binders — Determination of needle penetration*

EN 1427, *Bitumen and bituminous binders — Determination of the softening point — Ring and Ball method*

EN 12591, *Bitumen and bituminous binders — Specifications for paving grade bitumens*

EN 12595, *Bitumen and bituminous binders — Determination of kinematic viscosity*

EN 12596, *Bitumen and bituminous binders — Determination of dynamic viscosity by vacuum capillary*

EN 12697-1, *Bituminous mixtures — Test methods for hot mix asphalt — Part 1: Soluble binder content*

EN 12697-2, *Bituminous mixtures — Test methods — Part 2: Determination of particle size distribution*

EN 12697-3, *Bituminous mixtures — Test methods for hot mix asphalt — Part 3: Bitumen recovery: Rotary evaporator*

EN 12697-4, *Bituminous mixtures — Test methods — Part 4: Bitumen recovery: Fractionating column*

EN 12697-5, *Bituminous mixtures — Test methods for hot mix asphalt — Part 5: Determination of the maximum density*

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

EN 13108-20:2016 (E)

EN 12697-8, *Bituminous mixtures — Test methods for hot mix asphalt — Part 8: Determination of void characteristics of bituminous specimens*

EN 12697-11, *Bituminous mixtures — Test methods for hot mix asphalt — Part 11: Determination of the affinity between aggregate and bitumen*

EN 12697-12, *Bituminous mixtures — Test methods for hot mix asphalt — Part 12: Determination of the water sensitivity of bituminous specimens*

EN 12697-16, *Bituminous mixtures — Test methods for hot mix asphalt — Part 16: Abrasion by studded tyres*

EN 12697-17, *Bituminous mixtures — Test methods for hot mix asphalt — Part 17: Particle loss of porous asphalt specimen*

EN 12697-18, *Bituminous mixtures — Test methods for hot mix asphalt — Part 18: Binder drainage*

EN 12697-19, *Bituminous mixtures — Test methods for hot mix asphalt — Part 19: Permeability of specimen*

EN 12697-20, *Bituminous mixtures — Test methods for hot mix asphalt — Part 20: Indentation using cube or cylindrical specimens (CY)*

EN 12697-21, *Bituminous mixtures — Test methods for hot mix asphalt — Part 21: Indentation using plate specimens*

EN 12697-22, *Bituminous mixtures — Test methods for hot mix asphalt — Part 22: Wheel tracking*

EN 12697-24:2012, *Bituminous mixtures — Test methods for hot mix asphalt — Part 24: Resistance to fatigue*

EN 12697-25, *Bituminous mixtures — Test methods for hot mix asphalt — Part 25: Cyclic compression test*

EN 12697-26, *Bituminous mixtures — Test methods for hot mix asphalt — Part 26: Stiffness*

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

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

EN 12697-32, *Bituminous mixtures — Test methods for hot mix asphalt — Part 32: Laboratory compaction of bituminous mixtures by vibratory compactor*

EN 12697-33, *Bituminous mixtures — Test methods for hot mix asphalt — Part 33: Specimen prepared by roller compactor*

EN 12697-34, *Bituminous mixtures — Test methods for hot mix asphalt — Part 34: Marshall test*

EN 12697-35, *Bituminous mixtures — Test methods for hot mix asphalt — Part 35: Laboratory mixing*

EN 12697-39, *Bituminous mixtures — Test methods for hot mix asphalt — Part 39: Binder content by ignition*

EN 12697-41, *Bituminous mixtures — Test methods for hot mix asphalt — Part 41: Resistance to de-icing fluids*

EN 12697-43, *Bituminous mixtures — Test methods for hot mix asphalt — Part 43: Resistance to fuel*

EN 12697-44, *Bituminous mixtures — Test methods for hot mix asphalt — Part 44: Crack propagation by semi-circular bending test*

EN 12697-45, *Bituminous mixtures — Test methods for hot mix asphalt — Part 45: Saturation Ageing Tensile Stiffness (SATS) conditioning test*

EN 12697-46, *Bituminous mixtures — Test methods for hot mix asphalt — Part 46: Low temperature cracking and properties by uniaxial tension tests*

EN 12697-49, *Bituminous mixtures — Test methods for hot mix asphalt — Part 49: Determination of friction after polishing*

EN 13043, *Aggregates for bituminous mixtures and surface treatments for roads, airfields and other trafficked areas*

EN 13108-1, *Bituminous mixtures — Material specifications — Part 1: Asphalt Concrete*

EN 13108-2, *Bituminous mixtures — Material specifications — Part 2: Asphalt Concrete for very thin layers*

EN 13108-3, *Bituminous mixtures — Material specifications — Part 3: Soft Asphalt*

EN 13108-4, *Bituminous mixtures — Material specifications — Part 4: Hot Rolled Asphalt*

EN 13108-5, *Bituminous mixtures — Material specifications — Part 5: Stone Mastic Asphalt*

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

EN 13108-7, *Bituminous mixtures — Material specifications — Part 7: Porous Asphalt*

EN 13108-8:2016, *Bituminous mixtures — Material specifications — Part 8: Reclaimed asphalt*

EN 13108-9, *Bituminous mixtures — Material specifications — Part 9: Asphalt for Ultra-Thin Layer (AUTL)*

EN 13108-21:2016, *Bituminous mixtures — Material specifications — Part 21: Factory Production Control*

EN 13924-1, *Bitumen and bituminous binders — Specification framework for special paving grade bitumen — Part 1: Hard paving grade bitumens*

EN 13924-2, *Bitumen and bituminous binders — Specification framework for special paving grade bitumen — Part 2: Multigrade paving grade bitumens*

EN 14023, *Bitumen and bituminous binders — Specification framework for polymer modified bitumens*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN