## BS EN 13108-1:2016



## **BSI Standards Publication**

# Bituminous mixtures — Material specifications

Part 1: Asphalt Concrete



BS EN 13108-1:2016 BRITISH STANDARD

#### National foreword

This British Standard is the UK implementation of EN 13108-1:2016. It supersedes BS EN 13108-1:2006 which is withdrawn.

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 secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2016. Published by BSI Standards Limited 2016

ISBN 978 0 580 82043 4

ICS 93.080.20

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 June 2016.

Amendments/corrigenda issued since publication

Date Text affected

## EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN 13108-1

June 2016

ICS 93.080.20

Supersedes EN 13108-1:2006

#### **English Version**

## Bituminous mixtures - Material specifications - Part 1: Asphalt Concrete

Mélanges bitumineux - Spécifications pour le matériau - Partie 1: Enrobés bitumineux

Asphaltmischgut - Mischgutanforderungen - Teil 1: Asphaltbeton

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

© 2016 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN 13108-1:2016 E

Conte	ents	Page
Europ	ean foreword	4
Introd	uction	6
1	Scope	7
	Normative references	
2		
3	Terms, definitions, symbols and abbreviations	
3.1	Terms and definitions	
3.2	Symbols and abbreviations	
4	Requirements for constituent materials	
4.1	General	
4.2	Binder	
4.2.1	General	
4.2.2	Selection of binder	
4.3	Aggregates	
4.3.1	Coarse aggregate	
4.3.2	Fine aggregate	
4.3.3	All-in aggregates	
4.3.4	Added filler	_
4.4	Reclaimed asphalt	
4.5	Additives	13
5	Requirements for the mixture	14
5.1	General	
5.2	Composition, grading, binder content	
5.2.1	Composition	
5.2.2	Grading	
5.2.3	Minimum binder content	
5.2.5 5.3	Properties	
5.3.1	Specimens	
5.3.2	Void content requirements	
5.3.3	Water sensitivity	
5.3.4	Resistance to abrasion by studded tyres	
5.3. <del>4</del> 5.3.5	Resistance to appraisance to appraisance to permanent deformation	
5.3.6	Stiffness	
5.3.7	Resistance to fatigue	
5.3.8	Saturation Ageing Tensile Stiffness conditioning test (Mixture SATS Durability	27
3.3.0	Index)	30
5.3.9	Low temperature properties	
	Fracture toughness	
	Friction after polishing	
	Coating and homogeneity	
	Reaction to fire	
	Marshall values for application on airfields	
	Resistance to fuel for application on airfields	
	Resistance to de-icing fluid for application on airfields	
5.3.10 5.4	Temperature of the mixture	
5. <del>4</del> 5.5	Regulated dangerous substances	
J.J	INCENIALE AND THE PROPERTY OF	

5.6	Conflicting requirements	37
6	Assessment and verification of constancy of performance — AVCP	38
7	Identification	38
Annex	A (normative) Calculations of the penetration or the softening point of the binder of a mixture when reclaimed asphalt is used	40
A.1	General	
A.2	Calculation of the penetration of the binder of a mixture	40
<b>A.3</b>	Calculation of the softening point of the binder of a mixture	
Annex	ZA (informative) Relationship of this European Standard with Regulation (EU)	40
	No. 305/2011	42

### **European foreword**

This document (EN 13108-1:2016) 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 13108-1:2006.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of Regulation (EU) No 305/2011 for construction products (CPR).

For relationship with Regulation (EU) No 305/2011 see informative Annex ZA which is an integral part of this document.

Compared with EN 13108-1:2006, the following changes have been made:

- a) general, empirical and fundamental approaches have been merged into one list with different properties;
- b) new properties introduced (saturation tensile stiffness conditioning test, low temperature properties, fracture toughness, friction after polishing);
- c) additional optional sieves for the characterization of the grading;
- d) for several properties additional categories are introduced;
- e) possibility to define specific conditions in documents related to the application of the product;
- f) CPR reference and new Annex ZA according CPR rules.

This European Standard is one of a series of standards 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