



**NSAI**  
Standards

Irish Standard  
I.S. EN 13108-5:2016

# Bituminous mixtures - Material specifications - Part 5: Stone Mastic Asphalt

**I.S. EN 13108-5:2016**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

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## National Foreword

I.S. EN 13108-5:2016 is the adopted Irish version of the European Document EN 13108-5:2016, Bituminous mixtures - Material specifications - Part 5: Stone Mastic Asphalt

I.S. EN 13108-5:2016 is one of a series of European standards for bituminous mixtures. I.S. EN 13108-5:2016 revises I.S. EN 13108-5:2006.

The current Standard Recommendation S.R. 28:2009 provides guidance on the use in Ireland of the I.S. EN 13108 series of standards.

S.R. 28 is currently being revised by the NSAI Roads Standards Consultative Committee, Asphalt working group to provide guidance in Ireland to the 2016 versions of the I.S. EN 13108 series of standards.

NSAI plans to publish the revised S.R. 28 in quarter 2 of 2017 and withdraw S.R. 28:2009 with its associated versions of the I.S. EN 13108 series of standards.

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

**Compliance with this document does not of itself confer immunity from legal obligations.**

*In line with international standards practice the decimal point is shown as a comma (,) throughout this document.*

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EUROPEAN STANDARD

**EN 13108-5**

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2016

ICS 93.080.20

Supersedes EN 13108-5:2006

English Version

## Bituminous mixtures - Material specifications - Part 5: Stone Mastic Asphalt

Mélanges bitumineux - Spécifications des matériaux -  
Partie 5: Béton bitumineux grenu à forte teneur en  
mastic

Asphaltmischgut - Mischgutanforderungen - Teil 5:  
Splittmastixasphalt

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.



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**EN 13108-5:2016 (E)****European foreword**

This document (EN 13108-5:2016) 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 13108-5:2006.

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 European Standard.

Compared with EN 13108-5:2006, the following changes have been made:

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

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*

Annex A (normative) details the calculation of the penetration or the softening point in mixtures containing reclaimed asphalt from the penetrations or softening points of the added binder and the recovered binder from the reclaimed asphalt.

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.

**EN 13108-5:2016 (E)****Introduction**

The aim of this European Standard is to enable specification of Stone Mastic Asphalt on a performance basis. In general, however, there are currently more empirical tests available to describe the mixtures. Depending on the experience with the combination of requirements in this European standard more or less degrees of freedom for the producer may be given.

This European Standard covers a large variety of materials for different applications, traffic and climate conditions. EN 13108-5 gives properties and listings of possible categories. It has to accommodate the road industry for all of Europe. For this reason the menu approach for properties has been chosen. The tables represent categories that are required all over Europe. For this reason numerical values in tables do not always obey statistical rules. Based on conditions of use specific properties and categories may be defined in documents related to the application of the product. The categories defined in those documents need to take into account the reproducibility of the test when this is given in the appropriate test method.

Care should be taken to only select those tests which are relevant to the application of the asphalt and the use of the pavement and to avoid a combination of potentially conflicting requirements.

## 1 Scope

This European Standard specifies requirements for mixtures of the mix group Stone Mastic Asphalt for use on roads, airfields and other trafficked areas. Stone Mastic Asphalt is mainly to be used for surface courses. Stone Mastic Asphalt can also be used for regulating and binder courses.

The mixtures of the mix group Stone Mastic Asphalt are produced on the basis of hot bitumen. Mixtures utilizing bitumen emulsion and bituminous materials based on *in situ* recycling are not covered by this standard.

This European Standard includes requirements for the selection of the constituent materials. It is designed to be read in conjunction with EN 13108-20 and EN 13108-21.

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

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

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

EN 12697-13, *Bituminous mixtures — Test methods for hot mix asphalt — Part 13: Temperature measurement*

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

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

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

EN 12697-24, *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*

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