



NSAI
Standards

Irish Standard
I.S. EN 13924-2:2014

Bitumen and bituminous binders -
Specification framework for special paving
grade bitumen - Part 2: Multigrade paving
grade bitumens

I.S. EN 13924-2:2014

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Bitumes et liants bitumineux - Cadre de spécifications pour les bitumes routiers spéciaux - Partie 2: Bitumes routiers multigrades

Bitumen und bitumenhaltige Bindemittel - Anforderungsrahmenwerk für spezielle Straßenbaubitumen - Teil 2: Multigrade Straßenbaubitumen

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Foreword

This document (EN 13924-2:2014) has been prepared by Technical Committee CEN/TC 336 "Bituminous binders", the secretariat of which is held by AFNOR.

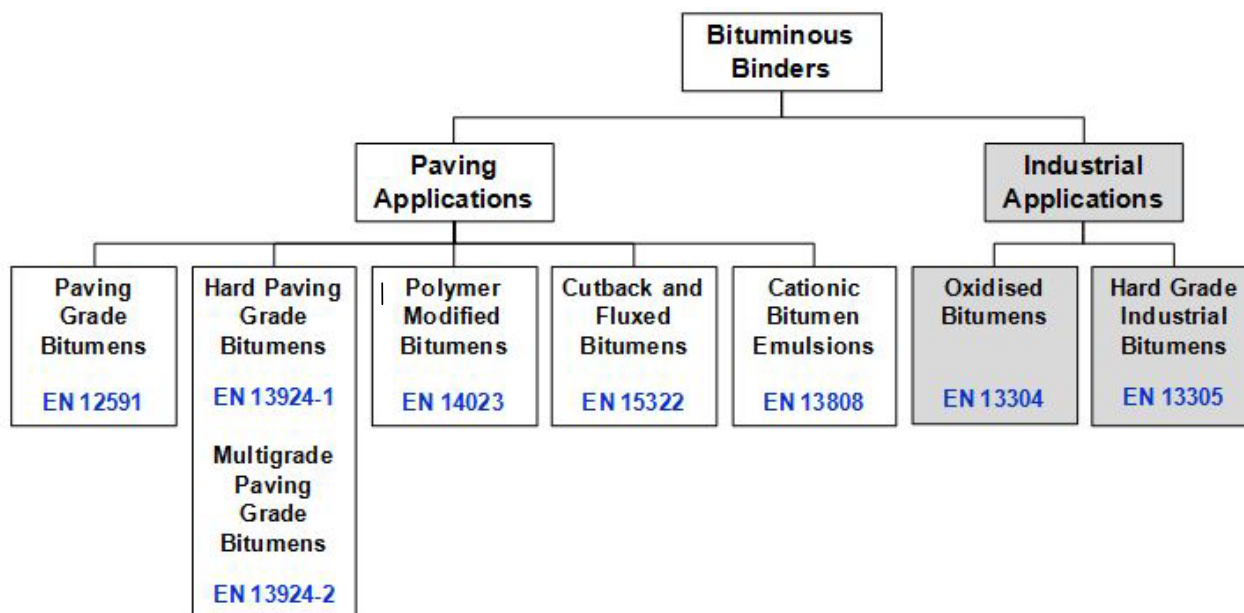
This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2014 and conflicting national standards shall be withdrawn at the latest by December 2015.

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 has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA which is an integral part of this document.

This European Standard is part of a family of European Standards for bitumen as follows:



NOTE Industrial applications are not covered by mandate M/124.

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 13924-2:2014 (E)**Introduction**

This document is closely related to EN 12591. This introduction gives information on the basis for selection of the grades defined in this document, the status of certain of the properties and test methods, and proposed development of this document.

The general principle adopted in the development of EN 12591 was to provide a range of grades suitable for the manufacture of the materials for road construction and maintenance used, and the climatic and traffic conditions encountered, in all the Member States. This document extends the range of grades specified in EN 12591, following the wider use of materials for road construction and maintenance.

This document has been based on the regional requirements identified when the process started. It is a first step in harmonising the so-called "empirical" specifications and it is intended to evaluate alternative properties and test methods to develop new specifications that are more directly performance-related. To this end, work programmes are being undertaken and the results will be considered for a future revision of this document. The progress of those work programmes are reported in CEN/TR 15352 [1], and the results will be considered for future revisions of this European Standard.

For multigrade paving grade bitumens (MG), the testing of the five essential characteristics, according to the mandate M/124, also gives an indication that its intrinsic cohesive properties are adequate for its normal use. The properties of "adhesion" and "setting ability" are indicated by tests used on the finished asphalt mixtures, EN 12697-1, EN 12697-11, EN 12697-12, EN 12697-26 (respectively [2] to [5]), rather than tests on the bitumen itself.

In certain acid modified binders the structure may change when mixed with aggregate.

Table B.1 lists informative properties which suppliers of multigrade bitumens are encouraged to produce as "Supplier Declared Values". It is hoped that the data so provided will form the basis for developing performance-related specifications in the future.

1 Scope

This document provides a framework for specifying the properties and relevant test methods for multigrade paving grade bitumens which are suitable for use in the construction and maintenance of roads, airfields and other paved areas, together with information for attestation and verification of constancy of performance. Multigrade paving grade bitumens are designated in EN 12597:2000 as special bitumens for road applications having a positive penetration index (I_p).

This document does not directly address cohesion, adhesion and settling ability, (see Clause Introduction).

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 58, *Bitumen and bituminous binders - Sampling bituminous binders*

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 12592, *Bitumen and bituminous binders - Determination of solubility*

EN 12593, *Bitumen and bituminous binders - Determination of the Fraass breaking point*

EN 12594, *Bitumen and bituminous binders - Preparation of test samples*

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

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

EN 12597:2000, *Bitumen and bituminous binders - Terminology*

EN 12607-1, *Bitumen and bituminous binders - Determination of the resistance to hardening under the influence of heat and air - Part 1: RTFOT method*

EN 15326 *Bitumen and bituminous binders – Measurement of density and specific gravity – Capillary-stoppered pycnometer method*

EN ISO 2592, *Determination of flash and fire points - Cleveland open cup method (ISO 2592:2000)*

EN ISO 4259, *Petroleum products - Determination and application of precision data in relation to methods of test (ISO 4259)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12597:2000 apply.

3.1

multigrade paving grade bitumens

multigrade paving grade bitumens are designated by stating MG and the nominal penetration range at 25 °C, followed by the softening point range (see Table 1), e.g. "MG 20/30-64/74"

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