SLOVENSKI STANDARD
SIST EN 13304:2003

01-december-2003

Bitumen in bitumenska veziva – Okvirna specifikacija za oksidirane bitumne

Bitumen and bituminous binders - Framework for specification of oxidised bitumens

Bitumen und bitumenhaltige Bindemittel - Spezifikationsrahmen für oxidiertes Bitumen

Bitumes et liants bitumineux - Cadre de spécifications des bitumes oxydés

Ta slovenski standard je istoveten z: **EN 13304:2003**

ICS:

75.140	Voski, bitumni in drugi naftni proizvodi	Waxes, bituminous materials and other petroleum products
91.100.50	Veziva. Tesnilni materiali	Binders. Sealing materials

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EUROPEAN STANDARD

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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Foreword

This document (EN 13304:2003) 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of an identical text or by endorsement, at the latest by October 2003, and conflicting national standards shall be withdrawn at the latest by October 2003.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovak Republic, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This European Standard provides a framework for the specification of oxidised bitumen used mainly in roofing, waterproofing and adhesives.

Within Europe several types of oxidised bitumens are used and, dependent on climatic conditions, type of building construction and traditional practices, different grades may be used for the same purpose. The framework given in this Standard provides a basis for quality agreements to be established between supplier and client.

The oxidised bitumen products are graded by a combination of the values of ring and ball softening point and penetration at 25 °C, expressed as multiples of 5.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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

EN 1427, *Bitumen and bituminous binders – Determination of 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 13301, *Bitumen and bituminous binders – Determination of staining tendency of bitumen.*

EN 13302, *Bitumen and bituminous binders – Determination of viscosity of bitumen using a rotating spindle apparatus.*

EN 13303, *Bitumen and bituminous binders – Determination of the loss in mass after heating of industrial bitumen.*

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

EN ISO 3838, *Crude petroleum and liquid or solid petroleum products – Determination of density or relative density – Capillary-stoppered pyknometer and graduated bicapillary pyknometer methods (ISO 3838:1983).*

3 Properties and test methods

The specification of an oxidised bitumen shall be made according to the rules given in Table 1:

Table 1 — Properties and test methods

Property	Limits and tolerances	Test methods
Ring and ball softening point[a]	± 5 °C of value	EN 1427
Penetration at 25 °C	± 5 x 0,1 mm of value	EN 1426
Solubility in xylene[b] , min.	99 %	EN 12592
Loss on heating, max.	0,5 %	EN 13303
Flash point, min.	250 °C	EN ISO 2592
Fraass breaking point	c	EN 12593
Staining properties	c	EN 13301
Density	c	EN ISO 3838
Dynamic viscosity[d]	c	EN 13302

a Ring and ball softening point testing for oxidised bitumens is carried out in glycerol.

b If other solvents are used, it shall be stated in the test report.

c Values can be agreed between client and supplier.

d The type of instrument used to determine viscosity should be agreed between supplier and client.

4 Typical grades

Typical grades for oxidised bitumens are:

85/25; 85/40; 95/25; 95/35; 100/40; 105/35; 110/30; 115/15.

EXAMPLE 85/25 means that the Ring and ball softening point of the product is between 80 °C and 90 °C and penetration between 20 x 0,1 mm and 30 x 0,1 mm.

NOTE This list does not imply that the grades are available in all countries, neither is it intended to be comprehensive or limiting. Other grades may be supplied in accordance with the local custom or circumstance, and by agreement between client and supplier.