This is a free page sample. Access the full version online.

National Standards Authority of Ireland

IRISH STANDARD

I.S. EN 12606-2:2000

ICS 75 140
91.100.50

National Standards
Authority of Ireland
Glasnevin, Dublin 9
Ireland

Tel: +353 1 807 3800
Fax: +353 1 807 3838
http://www.nsai.ie

Sales
http://www.standards.ie

BITUMEN AND BITUMINOUS BINDERS - DETERMINATION OF THE PARAFFIN WAX CONTENT - PART 2: METHOD BY EXTRACTION

This Irish Standard was published under the authority of the National Standards Authority of Ireland and comes into effect on.

February 25, 2000

NO COPYING WITHOUT NSAI PERMISSION EXCEPT AS PERMITTED BY COPYRIGHT LAW

© NSAI 2000

Price Code E

Údarás um Chaighdeáin Náisiúnta na hÉireann

This is a free page sample. Access the full version online.

This is a free page sample. Access the full version online.

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 12606-2

October 1999

ICS 75.140

English version

Bitumen and bituminous binders - Determination of the paraffin wax content - Part 2: Method by extraction

Bitumes et liants bitumineux - Détermination de la teneur en paraffines - Partie 2: Méthode par extraction

Bitumen und bitumenhaltige Bindemittel - Bestimmung des Paraffingehaltes - Teil 2: Extraktionsverfahren

This European Standard was approved by CEN on 5 September 1999.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPAISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

© 1999 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN 12606-2:1999 E

This is a free page sample. Access the full version online.

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 19 "Petroleum products, lubricants and related products", the secretariat of which is held by NNI.

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 April 2000, and conflicting national standards shall be withdrawn at the latest by April 2000.

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, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

This draft European standard is based upon AFNOR NF T 66-015:1984.

This draft European standard EN 12606 consists of the following parts under the general title Bitumen and bituminous binders – Determination of the paraffin wax content

Part 1: Method by distillation
Part 2: Method by extraction

This is a free page sample. Access the full version online.

1 Scope

This European Standard specifies a procedure for determining the paraffin wax content of bitumen and bituminous binders by the AFNOR method.

WARNING The use of this European standard can involve hazardous materials, operations and equipment. This standard does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

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.

EN 58, *Sampling bituminous binders*

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

EN ISO 3696, *Water for analytical laboratory use - Specification and test methods (ISO 3696:1987)*

ISO 4793, *Laboratory sintered (fritted) filters - Porosity grading, classification and designation*

ISO 5272, *Toluene for industrial use - Specifications.*

3 Terms and definitions

For the purposes of this European Standard, the following definition applies.

3.1
paraffin wax
hydrocarbons crystallising in an ether/ethanol 50 % *(V/V)* mixture at temperatures down to -20 °C, obtained by a specified process and having a range of melting of above 25 °C.

4 Principle

Paraffin wax present in bitumen is determined after the extraction of asphaltenes with petroleum spirit and the extraction of most aromatic components with oleum. The extracted sample is dissolved in a mixture of ethanol and ether of sufficient volume for all of the oily components to remain in solution when it is later cooled to crystallize the paraffin wax. The solution is cooled to -20 °C ± 0,5 °C and the crystallized paraffin wax filtered off and collected in a filtering crucible, itself cooled to -20 °C ± 0,5 °C. The paraffin wax crystals are re-dissolved in warm toluene, which is evaporated and the paraffin wax residue weighed.

This is a free page sample. Access the full version online.

5 Reagents and materials

Use only reagents of recognized analytical grade and water conforming to grade 3 of EN ISO 3696.

5.1 Toluene conforming to ISO 5272;

5.2 Sulphuric acid at 96% concentration (density at 20°C = 1 835 kg/m³);

5.3 Oleum, 60 % SO_3 (*V/V*) in H_2SO_4;

5.4 Ethanol, 99 % *(V/V)*;

5.5 Ethoxyethane (diethyl ether), anhydrous;

5.6 Sodium hydroxide, pellets;

5.7 Phenolphthalein, solution of 1 % phenolphthalein in 99 % ethanol;

5.8 Petroleum spirit, density approximately 645 kg/m³ at 15 °C and distillation range approximately 30 °C to 75 °C.

NOTE The product referred to as petroleum ether is suitable.

6 Apparatus

Usual laboratory apparatus and glassware, together with the following:

6.1 Erlenmeyer flasks, 150 ml stoppered ;

6.2 Filtering crucible with a calcined glass plate, having a porosity of P16 (see ISO 4793);

6.3 Vacuum flask, 500 ml, and pumping system;

6.4 Separating funnel, 500 ml;

6.5 Crystallizer (approximately 50 mm diameter);

6.6 Balance accurate to ± 2 mg, readable to 0,1 mg;

6.7 Insulated receptacle containing a refrigerating liquid maintained at a temperature of -20 °C ± 0,5 °C by a suitable device;

6.8 Water-bath, regulated to 30 °C – 40 °C, for evaporating the solutions ;

6.9 Oven regulated to 100 °C – 110 °C.

6.10 Thermometers, referred to in this standard as:

6.10.1 Sample thermometer: a solid stem thermometer, in the range -38 °C to +50 °C, and with a subdivision every 1 °C, total length 360 mm ± 5 mm, immersion 180 mm ± 5 mm, stem outside diameter 10 mm ± 0,5 mm.

SAI GLOBAL

This is a free preview. Purchase the entire publication at the link below:

Product Page

Looking for additional Standards? Visit Intertek Inform Infostore

Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation