This is a preview of "BS EN 15376:2014". Click here to purchase the full version from the ANSI store.

BS EN 15376:2014



BSI Standards Publication

Automotive fuels — Ethanol as a blending component for petrol — Requirements and test methods

bsi.

...making excellence a habit.™

This is a preview of "BS EN 15376:2014". Click here to purchase the full version from the ANSI store.

This British Standard is the UK implementation of EN 15376:2014. It supersedes BS EN 15376:2011 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PTI/2, Liquid Fuels.

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 2014. Published by BSI Standards Limited 2014

ISBN 978 0 580 81348 1

ICS 71.080.60; 75.160.20

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 31 October 2014.

Amendments issued since publication

Date	Text affected

EUROPEAN STANDARD **EN 15376**

This is a preview of "BS EN 15376:2014". Click here to purchase the full version from the ANSI store.

EUROPÄISCHE NORM

October 2014

ICS 71.080.60; 75.160.20

Supersedes EN 15376:2011

English Version

Automotive fuels - Ethanol as a blending component for petrol - Requirements and test methods

Carburants pour automobiles - Ethanol comme base de mélange à l'essence - Exigences et méthodes d'essais

Kraftstoffe für Kraftfahrzeuge - Ethanol zur Verwendung als Blendkomponente in Ottokraftstoff - Anforderungen und Prüfverfahren

This European Standard was approved by CEN on 6 September 2014.

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

© 2014 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN 15376:2014 E

This is a preview of "BS EN 15376:2014". Click here to purchase the full version from the ANSI store.

Contents

Page

Foreword **3**

1 Scope **4**

2 Normative references **4**

3 Sampling **4**

4 Requirements and test methods **5**
4.1 Dyes and markers **5**
4.2 Additives **5**
4.3 Denaturing **5**
4.4 Generally applicable requirements and related test methods **6**
4.5 Climate dependent requirements **7**
4.6 Precision and dispute **7**

Bibliography **8**

This is a preview of "BS EN 15376:2014". Click here to purchase the full version from the ANSI store.

Foreword

This document (EN 15376:2014) has been prepared by Technical Committee CEN/TC 19 “Gaseous and liquid fuels, lubricants and related products of petroleum, synthetic and biological origin”, the secretariat of which is held by NEN.

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 2015 and conflicting national standards shall be withdrawn at the latest by April 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 supersedes EN 15376:2011.

This document has originally been prepared under mandate M/344 given to CEN by the European Commission and the European Free Trade Association along with other standards intended to be complementary to the regulatory measures contained in various EU Directives, see [1], [2], [3] and [4].

If (bio)ethanol is meant for use as automotive fuel component, this document applies. It is intended to call up this European Standard in EN 228 [5], in order to define the quality of (bio)ethanol which is added/blended to the petrol.

The major updates of this third version concern the inclusion of newly developed methods for determination of inorganic chloride and sulfate, plus the lowering of their respective limits. As experience with ICP-OES instruments in the market has grown, EN 15837 has become the method in case of dispute for copper and sulfur content.

The former version gave all relevant characteristics, requirements and test methods for (bio)ethanol, which were known at that time to be necessary to define the product to be used up to a maximum 10 % (*V/V*) blending component for automotive petrol fuel. With the actual document, the percentage of use is expanded to allow use at all percentages up to and including 85 % (*V/V*) and the requirements are updated accordingly.

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.

This is a preview of "BS EN 15376:2014". Click here to purchase the full version from the ANSI store.

1 Scope

This European Standard specifies requirements and test methods for marketed and delivered ethanol to be used as an extender for automotive fuel for petrol engine vehicles in accordance with the requirements of EN 228 [5]. It is applicable to ethanol used for blending at all levels up to and including 85 % (*V/V*).

NOTE For the purposes of this document, the term "% (*m/m*)" and "% (*V/V*)" are used to represent the mass fraction, μ, and the volume fraction, φ, respectively.

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 15485:2007, *Ethanol as a blending component for petrol — Determination of sulfur content — Wavelength dispersive X-ray fluorescence spectrometric method*

EN 15486:2007, *Ethanol as a blending component for petrol — Determination of sulfur content — Ultraviolet fluorescence method*

EN 15487:2007, *Ethanol as a blending component for petrol — Determination of phosphorus content — Ammonium molybdate spectrometric method*

EN 15488:2007, *Ethanol as a blending component for petrol — Determination of copper content — Graphite furnace atomic absorption spectrometric method*

EN 15489:2007, *Ethanol as a blending component for petrol — Determination of water content — Karl Fischer coulometric titration method*

EN 15491:2007, *Ethanol as a blending component for petrol — Determination of total acidity — Colour indicator titration method*

EN 15492:2012, *Ethanol as a blending component for petrol — Determination of inorganic chloride and sulfate content — Ion chromatographic method*

EN 15691:2009, *Ethanol as a blending component for petrol — Determination of dry residue (involatile material) — Gravimetric method*

EN 15692:2009, *Ethanol as a blending component for petrol — Determination of water content — Karl Fischer potentiometric titration method*

EN 15721:2013, *Ethanol as a blending component for petrol — Determination of higher alcohols, methanol and other impurities — Gas chromatographic method*

EN 15769:2009, *Ethanol as a blending component of petrol — Determination of appearance — Visual method*

EN 15837:2009, *Ethanol as a blending component for petrol — Determination of phosphorus, copper and sulfur content — Direct method by inductively coupled plasma optical emission spectrometry (ICP OES)*

EN 15938:2010, *Automotive fuels — Ethanol blending component and ethanol (E85) automotive fuel — Determination of electrical conductivity*

EN ISO 3170:2004, *Petroleum liquids — Manual sampling (ISO 3170:2004)*