



BSI Standards Publication

Automotive fuels - Automotive ethanol (E85) fuel - Requirements and test methods

National foreword

This British Standard is the UK implementation of [EN 15293:2018](#). It supersedes [DD CEN/TS 15293:2011](#), which is withdrawn.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 2018
Published by BSI Standards Limited 2018

ISBN 978 0 580 93102 4

ICS 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 August 2018.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

English Version

Automotive fuels - Automotive ethanol (E85) fuel - Requirements and test methods

Carburants pour automobiles - Carburant
pour automobiles Ethanol (E85) -
Exigences et méthodes d'essai

Kraftstoffe - Ethanolkraftstoff (E85) -
Anforderungen und Prüfverfahren

This European Standard was approved by CEN on 6 May 2018.

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, Serbia, 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

Contents

Page

European foreword	iii
Introduction	v
1 Scope	6
2 Normative references	6
3 Terms and definitions	7
4 Sampling	7
5 Pump marking	7
6 Requirements and test methods	8
6.1 General	8
6.2 Constituents	8
6.3 Dyes and markers	8
6.4 Additives	8
6.5 Phosphorus	8
6.6 Denaturants	8
6.7 Generally applicable requirements and test methods	9
6.7.1 Overall requirements	9
6.7.2 Octane	9
6.8 Climatically dependent requirements and test methods	10
6.8.1 Water tolerance	10
6.8.2 Volatility requirements	10
6.9 Precision and dispute	11
6.9.1 Resolution of disputes	11
6.9.2 Arbitration test methods	11
Annex A (normative) Required updates to determination methods	12
Annex B (informative) Octane number considerations	14
Annex C (informative) A-deviations	15
Bibliography	16

European foreword

This document ([EN 15293:2018](#)) 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 November 2018, and conflicting national standards shall be withdrawn at the latest by November 2018.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes [CEN/TS 15293:2011](#).

Significant technical changes between this European Standard and [CEN/TS 15293:2011](#) are:

- the maximum level of ethers has been excluded as the requirement of using standardized unleaded petrol and ethanol as blending components made this requirement obsolete;
- the requirements towards contaminants originating mainly from ethanol are aligned with the newly revised [EN 15376](#) that has been updated in order to allow blending at all ethanol concentrations up to and including 85 % (V/V). An example is the lowering of the limit on sulfate content from 4,0 mg/kg to 2,6 mg/kg. Density minimum has been lowered from 0,760 g/m³ to 0,755 g/m³. As alignment of units for elemental contaminants is pursued, a mean density value of 0,780 g/cm³ has been used;
- in line with recent discussions in CEN/TC 19 on the dating of normative references in European fuel specifications, combined with the fact that the product specified in this document is not linked to EU Directives [1], [2], [3], dates of publication of test method standards have been removed where the CEN rules allow such;
- additional clarification on the impact of additives has been included;
- the determination of higher alcohols is now to be done by the multi-GC technique, because the O-FID technique has not been evaluated with a significant number of laboratories in the Round Robin exercise. EN ISO 22854 has been revised as it needed to include an additional procedure for E85;
- determinations using [EN 15837](#) (ICP) have been deleted as it seemed to have issues with high ethanol blends;
- appearance has been added to the table of requirements;
- the newly developed determination methods for methanol, vapour pressure and sulfur content have been introduced, as well as another sampling method (EN 14725). Where necessary a referee method has been identified;
- the conductivity limit has been aligned in terms of decimal with the reporting requirement of the test method;
- on the basis that petrol blend component in line with [EN 228](#) and ethanol in line with [EN 15376](#) would be used, properties that seem to be covered by other requirements, such as solvent washed existent gum and copper, have been removed from Table 1;
- the development towards a harmonized fuel labelling under CEN/TC 441 has been acknowledged by referencing its European Standard;
- [Annex A](#) has been updated following further or pending work by WG 9 and WG 27 under CEN/TC 19;
- following applications by AFNOR, DIN and NBN, A-deviations have been accepted;
- dated references to test methods have been updated.

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.