



BSI Standards Publication

# Automotive fuels — Ethanol (E85) automotive fuel — Background to the parameters required and their respective limits and determination

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### **National foreword**

This Published Document is the UK implementation of CEN/TR 15993:2013. It supersedes PD CEN/TR 15993:2010 which is withdrawn.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.

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English Version

## Automotive fuels - Ethanol (E85) automotive fuel - Background to the parameters required and their respective limits and determination

Carburants pour automobiles - Essence pour automobile  
Ethanol (E85) - Informations sur les paramètres requis et  
leurs limites et détermination respectives

Kraftstoffe für Kraftfahrzeuge - Ethanol-Kraftstoff (E85) -  
Hintergrund der geforderten Parameter und deren  
jeweiligen Grenzwerte und Bestimmung

This Technical Report was approved by CEN on 21 May 2011. It has been drawn up by the Technical Committee CEN/TC 19.

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## **Foreword**

This document (CEN/TR 15993:2013) 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.

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 CEN/TR 15993:2010.

The original Technical Report presented all decisions that led to the proposed draft of prCEN/TS 15293:2009 in order to support the enquiry ballot. This document includes all decisions that have been made following comments and further investigations leading to the effective publication of the ethanol (E85) automotive fuel specification as CEN/TS 15293:2011. In addition, it presents all further details leading to the effective revision of that CEN/TS into a full European Standard.

## **1 Scope**

This Technical Report explains the requirements and test methods for marketed and delivered ethanol (E85) automotive fuel according to CEN/TS 15293 [3]. It provides background information to judge the (approval of the) final text of the standard and gives guidance and explanations to the producers, blenders, marketers and users of ethanol (E85) automotive fuel.

NOTE 1 This document is directly related to CEN/TS 15293:2011 [3] and will be updated once further publications take place.

NOTE 2 For the purposes of this document, the terms “% (m/m)” and “% (V/V)” are used to represent the mass fraction,  $\mu$ , and the volume fraction,  $\varphi$ , respectively.

## **2 Summary of the ethanol fuel (E85) taskforce work**

At the 2007 plenary meeting, CEN/TC 19 decided to register the following work item as described in its active programme of work: "Automotive fuels — Ethanol E85 — Requirements and test methods", under responsibility of WG 21. The scope was to develop a CEN Standard on the basis of CWA 15293 [4] and existing related national standards and to check for the most appropriate wording of the title of the standard.

The work on the specification was developed during a series of Ethanol (E85) automotive fuel Task Force (TF E85) meetings between October 2007 and May 2009, and is presented by means of this Technical Report. The draft standard, referenced by the identification CEN/TS 15293, comprised a set of properties and limit values to define an adequate quality of the ethanol (E85) automotive fuel and recommendations for precautions to be taken (see Table 1 in CEN/TS 15293:2011 [3]).

The draft standard was presented to CEN/TC 19/WG 21 in November 2008, together with a request to allow the TF some additional time to finalise discussions and to study data that still needed to be generated from field experience, both of refinery and ethanol production. Following that November meeting, a draft enquiry text was developed and this was presented in January 2009 to WG 21 and thereafter to CEN/CCMC.

It should be noted that the draft standard had been considered on the basis of the ethanol blend component specification EN 15376 2007 [2] and the former version of the EN 228 (unleaded petrol) standard [1]. Revision discussion on those documents has been included in the discussions in the last two years. However, CEN/TS 15293 still contains some pending issues, which are noted as such in the text.

Many of the test methods proposed by the test methods experts are being examined to determine their applicability to ethanol (E85) fuel and to determine if their precision is sufficient to support the limit values proposed. This activity is being undertaken in several other CEN working groups where the specialists in methods are present.

An automatic link has been established between the gasoline and ethanol (EN 228 and EN 15376 respectively) standards and the ethanol (E85) automotive fuel (CEN/TS 15293) standard so that modifications to one will be coherent with the other.

## **3 Record of the work to date**

### **3.1 Context**

The European Commission is following a policy of promoting renewable energy use in Europe, and to this end is encouraging the extension of automotive gasoline fuel with a proportion of renewably-sourced ethyl alcohol (referred to in this document as ethanol).