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English Version

**Automotive fuels - Paraffinic diesel fuel and blends -
Background to the parameters required and their respective
limits and determination**

Carburants pour automobiles - Gazole paraffinique -
Historique sur la définition des paramètres requis, de leurs
limites et de leurs déterminations respectives

Kraftstoff für Kraftfahrzeuge - Paraffinischer Dieselmotorkraftstoff
und Kraftstoff-Mischungen - Hintergrund zu den
erforderlichen Parametern, den entsprechenden
Grenzwerten und deren Bestimmung

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (CEN/TR 16389:2012) 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 presents all decisions that led to the proposed draft of CEN/TS 15940 in order to support the enquiry ballot. This document includes all decisions that have been taken following comments and further investigations leading to the effective publication of the specification for paraffinic diesel from synthesis (XTL) or hydrotreatment (HVO).

1 Scope

This Technical Report explains the requirements and test methods for marketed and delivered paraffinic diesel from synthesis (XTL) or hydrotreatment (HVO) and of blends thereof with fatty acid methyl esters (FAME) according to European fuel specifications. 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 paraffinic automotive diesel.

NOTE 1 This document is directly related to the development of CEN/TS 15940 and will be updated once further publications take place.

NOTE 2 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 590:2009/A1:2010, *Automotive fuels – Diesel – Requirements and test methods*

EN 14214:2012¹⁾, *Liquid petroleum products — Fatty acid methyl esters (FAME) for use in diesel engines and heating applications — Requirements and test methods*

CEN/TS 15940, *Automotive fuels — Paraffinic diesel fuel from synthesis or hydrotreatment — Requirements and test methods*

3 Summary of the XTL-HVO taskforce work

Following the 68th CEN Technical Board meeting, CEN/TC 19 had been requested to check eventually existing conflicts between the scope of work as proposed for Workshop 61 on "Automotive fuels - Blends of paraffinic diesel from synthesis (XTL) or hydrotreatment (HVO) and fatty acid methyl esters (FAME) - Requirements and test methods". At a CEN/TC 19/WG 24 meeting on 30 November 2010, the consensus was that there was a possible conflict between EN 590 and the Workshop 61. The advice to both the proposers and CEN/TC 19 was to take upon the work on XTL/HVO. A TF under WG 24 was established in order to address the matter and also allowing specific paraffinic diesel fuel and engine experts to exchange information.

On 13 December 2010, the workshop 61 proposers had a teleconference with the TC Chairman and Secretary on the way forward for the agreed upon TF under WG 24. In the spirit of harmonisation, they thought it advisable that the already existing CWA 15940 should also be revised. That document had been developed in 2007 – 2009 by a CEN Workshop 38 and was meant for dedicated fleet usage. As already in 2010, XTL product were already reaching the EU and certain fleets had expressed interest in purchases on the basis of CWA 15940, the CWA would need to stay in place until any revisions had been completed.

Hence, a proposal to accept the idea of Workshop 61 as an active work under CEN/TC 19, followed by a revision of CWA 15940 was balloted. At the plenary meeting of May 2011, CEN/TC 19 accepted the two proposals for new work. In view of the time pressure, the paraffinic diesel - FAME blends needed to be specified via a CEN/TS.

The work on the specifications was developed during a series of Paraffinic diesel fuel and FAME blending Task Force (TF XTL-HVO) meetings between May and November 2011, and is presented by means of this Technical Report. The draft technical specification, now referenced by the identification CEN/TS 15940, comprises a set of properties and limit values to define an adequate quality of the paraffinic diesel fuel and recommendations for precautions to be taken.

1) Under publication