

Diesel and domestic heating fuels - Determination of cold filter plugging point - Linear cooling bath method

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English Version

**Diesel and domestic heating fuels - Determination of cold
filter plugging point - Linear cooling bath method**

Combustibles pour moteurs diesel et pour installations
de chauffage domestique - Détermination de la
température limite de filtrabilité - Méthode au bain à
refroidissement linéaire

Dieselmotoren und Haushaltsheizöle - Bestimmung
des Temperaturgrenzwertes der Filtrierbarkeit -
Verfahren mit einem linearen Kühlbad

This European Standard was approved by CEN on 16 October 2022.

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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.

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

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European foreword

This document (EN 16329:2022) 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of an identical text or by endorsement, at the latest by May 2023, and conflicting national standards shall be withdrawn at the latest by May 2023.

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 EN 16329:2013.

A significant technical difference between this document and the previous edition of EN 16329 is:

— Addition of the bias correction reporting format.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Introduction

The method included in this document is an alternative technique to EN 116 [1]. The cooling bath is no longer operated in several temperature stages (as in EN 116), but is replaced by a refrigeration unit with linear cooling.

Inter-laboratories studies (ILS) conducted for this determination method showed improved precision compared to EN 116. The studies covered currently marketed fuels, including non-fossil components (FAME-blends) or biofuels and paraffinic diesel fuels. The range of CFPP values for the fuels tested was from $-47\text{ }^{\circ}\text{C}$ to $+11\text{ }^{\circ}\text{C}$.

1 Scope

This document specifies an automated method for the determination of the cold filter plugging point (CFPP) of diesel and domestic heating fuels using linear cooling.

This document is applicable to fatty-acid methyl esters (FAME) and to distillate fuels as well as paraffinic diesel fuels, including those containing FAME, flow-improvers or other additives, intended for use in diesel engines and domestic heating installations.

The results obtained from the method specified in this document are suitable for estimating the lowest temperature at which a fuel will give trouble-free flow in the fuel system.

NOTE In the case of diesel fuels, the results are usually close to the temperature of failure in service except when the fuel system contains, for example, a paper filter installed in a location exposed to the weather or if the filter plugging temperature is more than 12 °C below the cloud point of the fuel. Domestic heating installations are usually less critical and often operate at a satisfactory level at temperatures somewhat lower than those indicated by the test results.

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

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

EN ISO 3171, *Petroleum liquids — Automatic pipeline sampling (ISO 3171)*

EN ISO 17034, *General requirements for the competence of reference material producers (ISO 17034)*

ISO 261, *ISO general purpose metric screw threads — General plan*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

3.1

cold filter plugging point

CFPP

highest temperature at which a given volume of fuel fails to pass through a standardized filtration device in a specified time, when cooled under standardized conditions