

**Liquid petroleum products - Vapour pressure - Part 2: Determination of absolute vapour pressure (AVP) between 40 °C and 100 °C**

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## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 13016-2:2001 sisaldab Euroopa standardi EN 13016-2:2000 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 15.01.2001 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 13016-2:2001 consists of the English text of the European standard EN 13016-2:2000.</p> <p>This document is endorsed on 15.01.2001 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b></p> <p>This standard specifies a method for the determination of absolute vapour pressure of liquid petroleum products at elevated temperatures. The conditions used in the test described in this standard are a vapour to liquid ratio of 3:2 and an initial temperature of 37,8 °C or 31,0 °C. The method described is suitable for testing air-saturated samples that exert an air saturated vapour pressure of between 50 kPa and 500 kPa at temperatures between 40 °C and 100 °C.</p>	<p><b>Scope:</b></p> <p>This standard specifies a method for the determination of absolute vapour pressure of liquid petroleum products at elevated temperatures. The conditions used in the test described in this standard are a vapour to liquid ratio of 3:2 and an initial temperature of 37,8 °C or 31,0 °C. The method described is suitable for testing air-saturated samples that exert an air saturated vapour pressure of between 50 kPa and 500 kPa at temperatures between 40 °C and 100 °C.</p>
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ICS 75.160.20

Võtmesõnad:



ICS 75.160.20

**English version**

**Liquid petroleum products – Vapour pressure**

Part 2: Determination of absolute vapour pressure (AVP)  
between 40 °C and 100 °C  
(EN 13016-2 : 2000)

Produits pétroliers liquides –  
Pression de vapeur – Partie 2:  
Détermination de la pression de  
vapeur absolue (PVA) entre 40 °C  
et 100 °C  
(EN 13016-2 : 2000)

Flüssige Mineralölerzeugnisse –  
Dampfdruck – Teil 2: Bestimmung  
des absoluten Dampfdruckes (AVP)  
im Temperaturbereich zwischen  
40 °C und 100 °C  
(EN 13016-2 : 2000)

This European Standard was approved by CEN on 2000-08-04.

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 Central Secretariat or to any CEN member.

The European Standards exist 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 Central Secretariat has the same status as the official versions.

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**CEN**

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

**Central Secretariat: rue de Stassart 36, B-1050 Brussels**



## Foreword

This European Standard has been prepared by Technical Committee CEN/TC 19 "Petroleum products, lubricants and related products", the secretariat of which is held by NNI.

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 February 2001, and conflicting national standards shall be withdrawn at the latest by February 2001.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Annex A is for information only.

This European Standard is one of a series of standards as listed below:

EN 13016, *Liquid petroleum products - Vapour pressure*

*Part 1: Determination of air saturated vapour pressure (ASVP).*

*Part 2: Determination of absolute vapour pressure (AVP) between 40 °C and 100 °C.*

NOTE Part 1 is based on IP 394<sup>1)</sup> and ASTM D 5191<sup>2)</sup>.

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<sup>1)</sup> IP 394: Determination of air saturated vapour pressure (ASVP)

<sup>2)</sup> ASTM D 5191:1996: Test method for vapor pressure of petroleum products (mini method)



## Introduction

Vapour pressure is one measure of the volatility characteristics of fuels used in many differing types of engines with large variations in operating temperatures. Fuels having high vapour pressure may vaporize too readily in the fuel handling systems, resulting in decreased flow to the engine and possible stoppage by vapour lock. Conversely, fuels of low vapour pressure may not vaporize readily enough, resulting in difficult starting, slow warm-up and poor acceleration.

## 1 Scope

This European Standard specifies a method for the determination of absolute vapour pressure of liquid petroleum products at elevated temperatures.

The conditions used in the test described in this standard are a vapour to liquid ratio of 3:2 and an initial injection temperature of 37,8 °C or 31,0 °C.

The method described is suitable for testing air-saturated samples that exert an air saturated vapour pressure of between 50 kPa and 500 kPa at temperatures between 40 °C and 100 °C.

This European Standard is applicable to fuels containing oxygenated compounds up to the limits stated in the relevant EC Directive<sup>3)</sup>.

NOTE 1 If a sample container of 1 l is utilized and the initial sample injection is into a test chamber at 37,8 °C, the initial measurement corresponds with the measurement in Part 1 of this standard.

NOTE 2 For the purposes of this European Standard, the term “% (V/V)” is used to represent the volume fraction.

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

## 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN ISO 3170, *Petroleum liquids - Manual sampling (ISO 3170: 1988, including Amendment 1: 1998)*.

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<sup>3)</sup> EC Directive 85/536/EEC, Council Directive on crude-oil savings through the use of substitute fuel components in petrol.