



**BSI Standards Publication**

## **Liquid petroleum products — Vapour pressure**

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Part 3: Determination of vapour pressure and calculated dry vapour pressure equivalent (DVPE) (Triple expansion method)

## National foreword

This British Standard is the UK implementation of EN 13016-3:2025. It supersedes BS EN 13016-3:2018, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PTI/13, Petroleum Testing and Terminology.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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English Version

**Liquid petroleum products - Vapour pressure - Part 3:  
Determination of vapour pressure and calculated dry  
vapour pressure equivalent (DVPE) (Triple expansion  
method)**

Produits pétroliers liquides - Pression de vapeur -  
Partie 3 : Détermination de la pression de vapeur et de  
la pression de vapeur sèche équivalente calculée  
(PVSE) (Méthode triple expansion)

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dem trockenen Dampfdruck entsprechenden Druckes  
(DVPE) (Dreifach-Expansionsmethode)

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COMITÉ EUROPÉEN DE NORMALISATION  
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**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

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## European foreword

This document (EN 13016-3:2025) 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of an identical text or by endorsement, at the latest by October 2025, and conflicting national standards shall be withdrawn at the latest by October 2025.

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 13016-3:2018.

EN 13016-3:2025 includes the following significant technical changes with respect to EN 13016-3:2018:

- updated safety warning;
- revised 15.1 to include 250 ml and 1 000 ml sample details;
- updated 15.2 and 15.3 text;
- updated Clause 6 Apparatus traceability requirements;
- new normative Annex B giving precision for 1 000 ml containers;
- new reagents in 5.4, 5.5, Clause 11 and new normative Annex A for verification purposes.

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.

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## Introduction

Vapour pressure is used as a classification criterion for the safe handling and carriage of petroleum products, feedstocks and components; it has a relationship to the potential for hydrocarbon emissions, under uncontrolled conditions, and thus is the subject of environmental scrutiny.

Vapour pressure limitations are often imposed to prevent pump cavitation during transfer operations.

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 a high vapour pressure can 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 vaporize not readily enough, resulting in difficult starting, slow warm-up and poor acceleration.

EN 13016 consists of the following parts, under the general title *Liquid petroleum products — Vapour pressure*:

- *Part 1: Determination of air saturated vapour pressure (ASVP) and calculated dry vapour pressure equivalent (DVPE);*
- *Part 2: Determination of absolute pressure (AVP) between 40 °C and 100 °C;*
- *Part 3: Determination of vapour pressure and calculated dry vapour pressure equivalent (DVPE) (Triple Expansion Method).*

This part is based on and developed in parallel with IP 619 [9] and ASTM D6378 [3].