



BSI Standards Publication

Liquid petroleum products - Vapour pressure

Part 1: Determination of air saturated vapour pressure (ASVP)
and calculated dry vapour pressure equivalent (DVPE)

National foreword

This British Standard is the UK implementation of EN 13016-1:2018 (dual numbered as BS 2000-394:2018). It supersedes BS EN 13016-1:2007 (dual numbered as BS 2000-394:2007), which is withdrawn.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 secretary.

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BS 2000 Series

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Amendments/corrigenda issued since publication

Date	Text affected
31 May 2018	Correction to add missing formula in Section 13 and National Foreword text for the dual numbered series

English Version

**Liquid petroleum products - Vapour pressure - Part 1:
Determination of air saturated vapour pressure (ASVP)
and calculated dry vapour pressure equivalent (DVPE)**

Produits pétroliers liquides - Pression de vapeur
- Partie 1 : Détermination de la pression de
vapeur saturée en air (PVSA) et de la pression
de vapeur sèche équivalente calculée (PVSE)

Flüssige Mineralölerzeugnisse - Dampfdruck - Teil
1: Bestimmung des luftgesättigten Dampfdruckes
(ASVP) und des berechneten dem trockenen
Dampfdruck entsprechenden Druckes (DVPE)

This European Standard was approved by CEN on 27 November 2017.

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European foreword

This document (EN 13016-1:2018) 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of an identical text or by endorsement, at the latest by October 2018, and conflicting national standards shall be withdrawn at the latest by October 2018.

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 13016-1:2007](#).

This new edition has been updated by enlarging the scope to include ethanol blends of up to 85 % (V/V). The range for the instrument verification fluids has been widened and new typical/consensus values added in an annex. The precision statements have been updated following a global evaluation in 2016.

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 394 [\[9\]](#) and ASTM D5191 [\[5\]](#).

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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 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.