

**NAFTASAADUSED JA SAMAVÄÄRSED TOOTED.  
MÕÕTEMEETODITE JA TULEMUSTE TÄPSUS. OSA 2:  
KATSEMEETODITEGA SEoses OLEVATE  
TÄPSUSANDMETE TÕLGENDAMINE JA KOHALDAMINE**

**Petroleum and related products - Precision of  
measurement methods and results - Part 2:  
Interpretation and application of precision data in  
relation to methods of test  
(ISO 4259-2:2017 + ISO 4259-2:2017/Amd 1:2019)**

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 4259-2:2017 +A1:2020 sisaldab Euroopa standardi EN ISO 4259-2:2017 ja selle muudatuse A1:2019 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 4259-2:2017 +A1:2020 consists of the English text of the European standard EN ISO 4259-2:2017 and its amendment A1:2019.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.  Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 06.12.2017, muudatus A1 16.10.2019.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.  Date of Availability of the European standard is 06.12.2017, for A1 16.10.2019.
Muudatusega A1 lisatud või muudetud teksti algus ja lõpp on tekstis ära märgitud märgenditega <b>A1</b> <b>A1</b> .  Standard on kättesaadav Eesti Standardikeskusest.	The start and finish of text introduced or altered by amendment A1 is indicated in the text by symbols <b>A1</b> <b>A1</b> .  The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile [standardiosakond@evs.ee](mailto:standardiosakond@evs.ee).

ICS 75.080

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English Version

Petroleum and related products - Precision of  
measurement methods and results - Part 2: Interpretation  
and application of precision data in relation to methods of  
test (ISO 4259-2:2017 + ISO 4259-2:2017/Amd 1:2019)

Produits pétroliers - Fidélité des méthodes de mesure  
et des résultats - Partie 2: Application des valeurs de  
fidélité relatives aux méthodes d'essai  
(ISO 4259-2:2017 + ISO 4259-2:2017/Amd 1:2019)

Mineralölerzeugnisse - Präzision von Messverfahren  
und Ergebnissen - Teil 2: Anwendung der Werte für die  
Präzision von Prüfverfahren (ISO 4259-2:2017 +  
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This European Standard was approved by CEN on 27 October 2017. Amendment A1 was approved by CEN on 5 July 2019.

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This European Standard and its Amendment A1 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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

## European foreword

This document (EN ISO 4259-2:2017) has been prepared by Technical Committee ISO/TC 28 "Petroleum and related products, fuels and lubricants from natural or synthetic sources" in collaboration with 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 June 2018, and conflicting national standards shall be withdrawn at the latest by June 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 ISO 4259:2006.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## Endorsement notice

The text of ISO 4259-2:2017 has been approved by CEN as EN ISO 4259-2:2017 without any modification.

## **A1 Amendment 1 European foreword**

This document (EN ISO 4259-2:2017/A1:2019) has been prepared by Technical Committee ISO/TC 28 "Petroleum and related products, fuels and lubricants from natural or synthetic sources" in collaboration with 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 Amendment to the European Standard EN ISO 4259-2:2017 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2020, and conflicting national standards shall be withdrawn at the latest by April 2020.

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### **Endorsement notice**

The text of ISO 4259-2:2017/Amd 1:2019 has been approved by CEN as EN ISO 4259-2:2017/A1:2019 without any modification. **A1**

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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This document was prepared by Technical Committee ISO/TC 28, *Petroleum and related products, fuels and lubricants from natural or synthetic sources*.

This first edition of ISO 4259-2, together with ISO 4259-1, cancels and replaces ISO 4259, which has been technically revised. This document provides the content of Clauses 7 to 10 of ISO 4259 and connected Annexes H and I. The remaining Clauses and Annexes A to G of ISO 4259:2006 are replaced by ISO 4259-1.

A list of all parts in the ISO 4259 series can be found on the ISO website.

## **A1** Amendment 1 foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html). **A1**

## Introduction

For purposes of setting product specifications, and to check product compliance against these specifications, standard test methods are usually referenced for specific properties of commercial petroleum and related products. Two or more measurements of the same property of a specific sample by a specific test method, or by different test methods that purport to measure the same property, will not usually give exactly the same result. It is, therefore, necessary to take proper account of this fact when setting product specifications, assessing if the differences between test results are within statistical expectation, and making specification compliance decisions based on limited test results. By using statistically-based estimates of the precision for a test method, the following can be achieved:

- an objective measure of the reliability of specification limits,
- a specification compliance decision, and
- the degree of agreement expected between two or more results obtained in specified circumstances.

This document describes the applications of the precision of test method as derived from ISO 4259-1. It is intended to be a companion document to ISO 4259-1. Additional normative and informative discussions on how to use this precision to assess the “in statistical control” status and precision capability of a specific laboratory in the execution of a test method are provided. Also, the general approach to the agreement between two different test methods that purport to measure the same property are given.

The two parts of ISO 4259 encompass both the determination of precision estimates and the application of precision data. It attempts to be aligned with ASTM D6300<sup>[1]</sup> regarding the determination of the precision estimates and with ASTM D3244<sup>[2]</sup> for the utilization of test data.

A glossary of the variables used in this document and ISO 4259-1 is included in ISO 4259-1:2017, Annex I.

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# Petroleum and related products — Precision of measurement methods and results —

## Part 2: Interpretation and application of precision data in relation to methods of test

### 1 Scope

This document specifies the methodology for the application of precision estimates of a test method derived from ISO 4259-1. In particular, it defines the procedures for setting the property specification limits based upon test method precision where the property is determined using a specific test method, and in determining the specification conformance status when there are conflicting results between supplier and receiver. Other applications of this test method precision are briefly described in principle without the associated procedures.

The procedures in this document have been designed specifically for petroleum and petroleum-related products, which are normally homogeneous. However, the procedures described in this document can also be applied to other types of homogeneous products. Careful investigations are necessary before applying this document to products for which the assumption of homogeneity can be questioned.

### 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.

ISO 4259-1, *Petroleum and related products — Precision of measurement methods and results — Part 1: Determination of precision data in relation to methods of test*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions in ISO 4259-1 and the following apply.

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

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

#### 3.1

**▮<sub>A1</sub>** proficiency testing scheme **▮<sub>A1</sub>**

**▮<sub>A1</sub>** PTS **▮<sub>A1</sub>**

program designed for the periodic evaluation of participating laboratories' testing capability of a Standard Test Method through the statistical analysis of their test results obtained on aliquots prepared from a single batch of homogeneous material