



SLOVENSKI STANDARD SIST EN ISO 3405:2011

01-marec-2011

Nadomešča:
SIST EN ISO 3405:2000

**Naftni proizvodi - Določevanje destilacijskih značilnosti pri atmosferskem tlaku
(ISO 3405:2011)**

Petroleum products - Determination of distillation characteristics at atmospheric pressure
(ISO 3405:2011)

Mineralölerzeugnisse - Bestimmung des Destillationsverlaufes bei Atmosphärendruck
(ISO 3405:2011)

Produits pétroliers - Détermination des caractéristiques de distillation à pression
atmosphérique (ISO 3405:2011)

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ICS:

75.080 Naftni proizvodi na splošno Petroleum products in
general

SIST EN ISO 3405:2011

en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 3405

January 2011

ICS 75.080

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English Version

**Petroleum products - Determination of distillation characteristics
at atmospheric pressure (ISO 3405:2011)**

Produits pétroliers - Détermination des caractéristiques de
distillation à pression atmosphérique (ISO 3405:2011)

Mineralölerzeugnisse - Bestimmung des
Destillationsverlaufes bei Atmosphärendruck (ISO
3405:2011)

This European Standard was approved by CEN on 31 December 2010.

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Foreword

This document (EN ISO 3405:2011) has been prepared by Technical Committee ISO/TC 28 "Petroleum products and lubricants" 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of an identical text or by endorsement, at the latest by July 2011, and conflicting national standards shall be withdrawn at the latest by July 2011.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 3405:2000.

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INTERNATIONAL STANDARD

ISO 3405

Fourth edition
2011-01-15

Petroleum products — Determination of distillation characteristics at atmospheric pressure

*Produits pétroliers — Détermination des caractéristiques de distillation à
pression atmosphérique*

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 3405 was prepared by Technical Committee ISO/TC 28, *Petroleum products and lubricants*.

This fourth edition cancels and replaces the third edition (ISO 3405:2000), which has been technically revised. It has been aligned with ASTM D86¹⁾.

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1) ASTM D86, *Standard Method for Distillation of Petroleum Products at Atmospheric Pressure*.

ISO 3405:2011(E)**Introduction**

The distillation (volatility) characteristics of hydrocarbons have an important effect on their safety and performance, especially in the case of fuels and solvents. The boiling range gives important information on composition and behaviour during storage and use, and the rate of evaporation is an important factor in the application of many solvents. Limiting values to specified distillation characteristics are applied to most distillate petroleum product specifications in order to control end-use performance and to regulate the formation of vapours which may form explosive mixtures with air or otherwise escape into the atmosphere as emissions (volatile organic compounds or VOCs).

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Petroleum products — Determination of distillation characteristics at atmospheric pressure

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

1 Scope

This International Standard specifies a laboratory test method, utilizing either manual or automated equipment, for determining the distillation characteristics of light and middle distillates derived from petroleum and having initial boiling points above 0 °C and end points below approximately 400 °C.

Light distillates are typically automotive engine petrols, automotive engine petrols with up to 10 % (V/V) ethanol and aviation petrols. Middle distillates are aviation turbine fuels, kerosenes, diesel, diesel with up to 20 % (V/V) FAME (fatty acid methylesters), burner fuels and marine fuels that have no appreciable quantities of residua.

NOTE For the purposes of this International Standard, “% (V/V)” is used to represent the volume fraction of a material.

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2 Normative references

The following referenced documents are indispensable for the application 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 918, *Volatile organic liquids for industrial use — Determination of distillation characteristics*

ISO 3170, *Petroleum liquids — Manual sampling*

ISO 3171, *Petroleum liquids — Automatic pipeline sampling*

ISO 4259, *Petroleum products — Determination and application of precision data in relation to methods of test*

ISO 4788:2005, *Laboratory glassware — Graduated measuring cylinders*

3 Terms and definitions

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

3.1

decomposition point

thermometer reading (corrected) which coincides with the first indications of thermal decomposition of the liquid in the flask

NOTE Characteristic indications of thermal decomposition are an evolution of fumes and erratic thermometer readings which usually show a decided decrease after any attempt has been made to adjust the heat.