

STN P	Automobilové palivá Benzín E20 Požiadavky a skúšobné metódy	STN P CEN/TS 18227 65 6581
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Automotive fuels - E20 petrol - Requirements and test methods

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 03/26

Táto predbežná slovenská technická norma je určená na overenie. Prípadné pripomienky pošlite do decembra 2027 Úradu pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky.

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TECHNICAL SPECIFICATION

CEN/TS 18227

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English Version

Automotive fuels - E20 petrol - Requirements and test methods

Carburants pour automobiles - Essence E20 -
Exigences et méthodes d'essaiKraftstoffe - E20-Ottokraftstoff - Anforderungen und
Prüfverfahren

This Technical Specification (CEN/TS) was approved by CEN on 7 December 2025 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

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European foreword

This document (CEN/TS 18227:2025) 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.

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.

The purpose of this new document is to provide scope for fuels containing higher levels of oxygenates (greater than 3,7 % (*m/m*) oxygen) as an enabler to help decarbonise the petrol-fuelled ICE light-duty vehicle fleet in Europe.

At the time of publication of this document, the marking at the pump of this product is not in line with the requirements of the European Fuel Quality Directive 98/70/EC [1], including its Amendments [2], [3], [4], [5], [6], [7] and [13] and the Alternative Fuels Infrastructure Directive Regulation [17].

At the time of publication of this document, petrol with a higher ethanol content than 10 % (*V/V*) or oxygen content higher than 3,7 % (*m/m*) is not allowed on the market in EU countries according to the Fuel Quality Directive (FQD) [1], therefore revisions to the FQD in these aspects would be required to enable E20 petrol to be sold in the European Union.

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.

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to announce this Technical Specification: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

CEN/TS 18227:2025 (E)**1 Scope**

This document specifies requirements and test methods for E20 petrol marketed and delivered as such, containing a minimum oxygen content of 3,7 % (m/m) and a maximum of 8,0 % (m/m). The fuel has a maximum of 20,0 % (V/V) ethanol.

It is applicable to fuel for use in spark-ignition petrol-fuelled engines and vehicles.

This document is complementary to EN 228, which describes unleaded petrol containing an oxygen content up to 3,7 % (m/m) and a maximum ethanol content of 10 % (V/V).

NOTE 1 For general petrol engine vehicle warranty, E20 petrol might not be suitable for all vehicles and it is advised that the recommendations of the vehicle manufacturer are consulted before use. E20 petrol might need a validation step to confirm the compatibility of the fuel with the vehicle, which for some existing engines might still be needed.

NOTE 2 For the purposes of this document, the terms “% (m/m)” and “% (V/V)” are used to represent respectively the mass fraction, μ , and the volume fraction, φ .

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.

EN 237, *Liquid petroleum products — Petrol — Determination of low lead concentrations by atomic absorption spectrometry*

EN 1601, *Liquid petroleum products — Determination of organic oxygenate compounds and total organically bound oxygen content in unleaded petrol — Method by gas chromatography (O-FID)*

EN 12177, *Liquid petroleum products — Unleaded petrol — Determination of benzene content by gas chromatography*

EN 13016-1, *Liquid petroleum products — Vapour pressure — Part 1: Determination of air saturated vapour pressure (ASVP) and calculated dry vapour pressure equivalent (DVPE)*

EN 13016-3, *Liquid petroleum products — Vapour pressure — Part 3: Determination of vapour pressure and calculated dry vapour pressure equivalent (DVPE) (Triple Expansion Method)*

EN 13132, *Liquid petroleum products — Unleaded petrol — Determination of organic oxygenate compounds and total organically bound oxygen content by gas chromatography using column switching*

EN 13723, *Petroleum products — Determination of low lead contents in gasolines — Wavelength-dispersive X-ray fluorescence spectrometry (XRF)*

EN 14275, *Automotive fuels — Assessment of petrol and diesel fuel quality — Sampling from retail site pumps and commercial site fuel dispensers*

EN 15376, *Automotive fuels — Ethanol as a blending component for petrol — Requirements and test methods*

EN 15489, *Ethanol as a blending component for petrol — Determination of water content — Karl Fischer coulometric titration method*

- EN 15553, *Petroleum products and related materials — Determination of hydrocarbon types — Fluorescent indicator adsorption method*
- EN 15692, *Ethanol as a blending component for gasoline — Determination of water content — Karl Fischer potentiometric titration method*
- EN 16136, *Automotive fuels — Determination of manganese and iron content in unleaded petrol — Inductively coupled plasma optical emission spectrometry (ICP OES) method*
- EN 16942, *Fuels — Identification of vehicle compatibility — Graphical expression for consumer information*
- EN 17306, *Liquid petroleum products — Determination of distillation characteristics at atmospheric pressure — Micro-distillation*
- EN 18015, *Automotive fuels — Determination of hydrocarbon group types and select hydrocarbon and oxygenate compounds — Gas chromatography with vacuum ultraviolet absorption spectroscopy (GC-VUV) method*
- EN ISO 2160, *Petroleum products — Corrosiveness to copper — Copper strip test (ISO 2160)*
- EN ISO 3170, *Petroleum liquids — Manual sampling (ISO 3170)*
- EN ISO 3171, *Petroleum liquids — Automatic pipeline sampling (ISO 3171)*
- EN ISO 3405, *Petroleum and related products from natural or synthetic sources — Determination of distillation characteristics at atmospheric pressure (ISO 3405)*
- EN ISO 3675, *Crude petroleum and liquid petroleum products — Laboratory determination of density — Hydrometer method (ISO 3675)*
- EN ISO 4259-2, *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)*
- EN ISO 5163, *Petroleum products — Determination of knock characteristics of motor and aviation fuels — Motor method (ISO 5163)*
- EN ISO 5164, *Petroleum products — Determination of knock characteristics of motor fuels — Research method (ISO 5164)*
- EN ISO 6246, *Petroleum products — Gum content of light and middle distillate fuels — Jet evaporation method (ISO 6246)*
- EN ISO 7536, *Petroleum products — Determination of oxidation stability of gasoline — Induction period method (ISO 7536)*
- EN ISO 12185, *Crude petroleum, petroleum products and related products — Determination of density — Laboratory density meter with an oscillating U tube sensor (ISO 12185)*
- EN ISO 13032, *Petroleum and related products — Determination of low concentration of sulfur in automotive fuels — Energy-dispersive X-ray fluorescence spectrometric method (ISO 13032)*
- EN ISO 20846, *Petroleum products — Determination of sulfur content of automotive fuels — Ultraviolet fluorescence method (ISO 20846)*

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EN ISO 20884, *Petroleum products — Determination of sulfur content of automotive fuels — Wavelength-dispersive X-ray fluorescence spectrometry (ISO 20884)*

EN ISO 22854, *Liquid petroleum products — Determination of hydrocarbon types and oxygenates in automotive-motor gasoline and in ethanol (E85) automotive fuel — Multidimensional gas chromatography method (ISO 22854)*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN