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LPG equipment and accessories - Automotive liquefied petroleum gas components - Other than containers

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

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English Version

LPG equipment and accessories - Automotive liquefied petroleum gas components - Other than containers

Équipements pour GPL et leurs accessoires -
Composants pour véhicules au gaz de pétrole liquéfié -
Composants autres que le réservoir

Flüssiggas-Geräte und Ausrüstungsteile - Bauteile für
Autogasanlagen/Treibgasanlagen - Bauteile,
ausgenommen Autogastanks

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European foreword

This document (EN 12806:2022) has been prepared by Technical Committee CEN/TC 286 “LPG equipment and accessories”, the secretariat of which is held by NSAI.

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of an identical text or by endorsement, at the latest by April 2023, and conflicting national standards shall be withdrawn at the latest by April 2023.

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 12806:2003.

In comparison with the previous edition, the following technical modifications have been made:

- Revised definitions;
- Updated normative references;
- General reference to *maximum allowable pressure* rather than *design or test pressure*;
- Addition of a new component (“Manual shut-off container valve”) and the relative subclause B.8;
- General revision of the Annexes.

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 implement this European Standard: 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.

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Introduction

Protection of the environment is a key political issue in Europe and elsewhere. For CEN/TC 286, this is covered in CEN/TS 16765 [7] and this Technical Specification should be read in conjunction with this document. The Technical Specification provides guidance on the environmental aspects to be considered regarding equipment and accessories produced for the LPG industry and the following is addressed:

- a) design;
- b) manufacture;
- c) packaging;
- d) use and operation; and
- e) disposal.

1 Scope

This document specifies the general design and testing requirements for all components in automotive Liquefied Petroleum Gas (LPG) propulsion systems, which have a maximum allowable pressure equal to or greater than 20 kPa.

This document also specifies the requirements for the Electric Control Unit (ECU), which is not subjected to pressure, and the gas-tight housing which has a maximum allowable pressure below 20 kPa.

This document does not apply to containers.

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 549:2019, *Rubber materials for seals and diaphragms for gas appliances and gas equipment*

EN 589, *Automotive fuels - LPG - Requirements and test methods*

EN 22768-1, *General tolerances - Part 1: Tolerances for linear and angular dimensions without individual tolerance indications (ISO 2768-1)*

EN 60529, *Degrees of protection provided by enclosures (IP code)*

EN IEC 60068-2-52, *Environmental testing - Part 2-52: Tests - Test Kb: Salt mist, cyclic (sodium chloride solution)*

EN ISO 1307:2008, *Rubber and plastics hoses - Hose sizes, minimum and maximum inside diameters, and tolerances on cut-to-length hoses (ISO 1307:2006)*

EN ISO 1402, *Rubber and plastics hoses and hose assemblies - Hydrostatic testing (ISO 1402)*

EN ISO 4080, *Rubber and plastics hoses and hose assemblies - Determination of permeability to gas (ISO 4080)*

EN ISO 8031, *Rubber and plastics hoses and hose assemblies - Determination of electrical resistance and conductivity (ISO 8031)*

EN ISO 9227, *Corrosion tests in artificial atmospheres - Salt spray tests (ISO 9227)*

EN ISO 10619-2:2021, *Rubber and plastics hoses and tubing - Measurement of flexibility and stiffness - Part 2: Bending tests at sub-ambient temperatures (ISO 10619-2:2021)*

ISO 37, *Rubber, vulcanized or thermoplastic — Determination of tensile stress-strain properties*

ISO 188, *Rubber, vulcanized or thermoplastic — Accelerated ageing and heat-resistance tests*

ISO 1431-1, *Rubber, vulcanized or thermoplastic — Resistance to ozone cracking — Part 1: Static and dynamic strain testing*

ISO 1436, *Rubber hoses and hose assemblies — Wire-braid-reinforced hydraulic types for oil-based or water-based fluids — Specification*

ISO 1817, *Rubber, vulcanized or thermoplastic — Determination of the effect of liquids*

ISO 6957, *Copper alloys — Ammonia test for stress corrosion resistance*

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