

Electrically propelled road vehicles - Measurement of energy performances - Part 2: Thermal electric hybrid vehicles

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 1986-2:2001 sisaldab Euroopa standardi EN 1986-2:2001 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 19.12.2001 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 1986-2:2001 consists of the English text of the European standard EN 1986-2:2001.</p> <p>This document is endorsed on 19.12.2001 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala:</p> <p>This standard aims at defining the range in pure electric driving mode and the consumption measurements for a thermal electric hybrid road vehicle from M1, N1, or M2 category, and for tricycles and quadricycles from the motorcycle types.</p>	<p>Scope:</p> <p>This standard aims at defining the range in pure electric driving mode and the consumption measurements for a thermal electric hybrid road vehicle from M1, N1, or M2 category, and for tricycles and quadricycles from the motorcycle types.</p>
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English version

**Electrically propelled road vehicles – Measurement of
energy performance**

Part 2: Thermal electric hybrid vehicles

Véhicules routiers à propulsion électrique – Mesurage des performances énergétiques – Partie 2: Véhicules hybrides électriques thermiques

Elektrisch angetriebene Straßenfahrzeuge – Messverfahren für Energieausnutzung – Teil 2: Thermisch hybride Elektrofahrzeuge

This European Standard was approved by CEN on 2001-03-08.

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

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CEN

European Committee for Standardization
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Europäisches Komitee für Normung

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 301 "Electrically propelled road vehicles", the secretariat of which is held by AFNOR.

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 2001, and conflicting national standards shall be withdrawn at the latest by October 2001.

CEN TC301 is dealing with "Electrically propelled road vehicles". This title includes, in fact, a wide range of electric road vehicles (see the definitions in EN 13447:2001) which can be divided as follows:

- pure electric vehicle : this is an electrically propelled and infrastructure independent exclusively electrically supplied road vehicle ;
- road vehicle fitted with an electric transmission : this vehicle remains in the scope of CEN/TC301 but is considered as a conventional (e.g. an internal combustion engine vehicle) vehicle with a specific transmission (no standards to be developed);
- thermal electric hybrid vehicles where the thermal engine has such a low level of power ¹⁾ compared to that of the power train may be treated as a pure electric vehicle from the measuring point of view;
- other infrastructure independent electric vehicles which are today called electric hybrid vehicles. These electric hybrid vehicles can run with a zero level pollutant emission;
- infrastructure dependent electrically propelled road vehicles are excluded from application of this standard.

A large amount of work has been undertaken on electric hybrid vehicles, and there is still a lot to discover on these vehicles which can, for instance, incorporate several driving modes (more than two);

To remain today within what is most common, the term thermal electric hybrid vehicle will be understood as an electric road vehicle fitted with a thermal machine (which is fed with fuel).

This European Standard EN 1986 consists of the following parts, under the general title "Electrically propelled road vehicles - Measurement of energy performances" :

- Part 1 : Pure electric vehicles ;
- Part 2 : Thermal electric hybrid vehicles ;
- Part 3 : Other electric hybrid vehicles than those fitted with a thermal machine.

Annex A forms an integral part of EN 1986-2.

Annex B to Annex E are for information only.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

¹⁾ In order to be able to use existing measuring facilities.

1 Scope

This standard aims at defining the range in pure electric driving mode and the consumption measurements for a thermal electric hybrid road vehicle from M₁, N₁, or M₂²⁾ category, and for tricycles and quadricycles from the motorcycle types³⁾.

This standard applies to the above-mentioned vehicles whose range and consumption can be tested following the provisions already laid down for conventional vehicles (i.e. Internal Combustion Engine vehicle) from the equivalent categories.

2 Normative references

This European Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 1821-1	Electrically propelled road vehicles - Measurement of road operating ability - Part 1: Pure electric vehicles
EN 1986-1:1997	Electrically propelled road vehicles - Measurement of energy performances - Part 1 : Pure electric vehicles
EN 13447:2001	Electrically propelled road vehicles - Terminology
EN ISO 3675	Crude petroleum and liquid petroleum products - Laboratory determination of density - Hydrometer method (ISO 3675:1998)

3 Terms and definitions

For the purposes of this European Standard, the following terms and definitions apply (see also EN 13447:2001).

3.1

electrically propelled road vehicle

road vehicle in which electric energy is transformed by electrical machine(s) into mechanical energy for traction purposes

NOTE Traction is the term used with the same meaning as propulsion, but for historical reasons, this is the most widely used term.

3.2

electric hybrid (road) vehicle

hybrid (road) vehicle in which one of the reversible energy source delivers electric energy

²⁾ Categories of vehicle M₁, N₁, and M₂ are defined in Directive 92/53/EEC. In practice, tricycles and quadricycles with a maximum speed over 45 km/h fall within the scope of this standard.

³⁾ Motor tricycles and quadricycles are defined in Directive 92/61/EEC.