



National Standards Authority of Ireland

IRISH STANDARD

I.S. EN 1821-2:1999

ICS 43.120

**ELECTRICALLY PROPELLED ROAD
VEHICLES - MEASUREMENT OF ROAD
OPERATING ABILITY - PART 2: THERMAL
ELECTRIC HYBRID VEHICLES**

National Standards
Authority of Ireland
Glasnevin, Dublin 9
Ireland

Tel: +353 1 807 3800
Fax: +353 1 807 3838
<http://www.nsai.ie>

Sales
<http://www.standards.ie>

*This Irish Standard was
published under the
authority of the National
Standards Authority of
Ireland and comes into
effect on:*

July 9, 1999

**NO COPYING WITHOUT NSAI
PERMISSION EXCEPT AS
PERMITTED BY COPYRIGHT
LAW**

© NSAI 1999

Price Code G

Údarás um Chaighdeán Náisiúnta na hÉireann

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 1821-2

March 1999

ICS 43.120

English version

**Electrically propelled road vehicles - Measurement of road
operating ability - Part 2: Thermal electric hybrid vehicles**

Véhicules routiers à propulsion électrique - Mesurage des
capacités routières - Partie 2: Véhicules hybrides
électriques thermiques

Elektrisch angetriebene Straßenfahrzeuge - Meßverfahren
für Fahreigenschaften - Teil 2: Hybride Elektrofahrzeuge
mit einem Verbrennungsmotor

This European Standard was approved by CEN on 20 February 1999.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Contents

Foreword	3
1 Scope	4
2 Normative reference	4
3 Definitions	4
3.1 complete vehicle kerb mass VKM	4
3.2 maximum design total mass MTM	4
3.3 test mass	4
3.4 thermal electric hybrid vehicle	5
3.5 hybrid mode (for an electric hybrid vehicle)	5
3.6 pure thermal mode	5
3.7 pure electric mode	5
3.8 On board energy source	5
3.9 on board primary electric energy source	6
3.10 maximum speed in hybrid mode	6
3.11 maximum speed in pure electric mode	6
3.12 acceleration 0 km/h to 100 km/h	6
3.13 acceleration 0 km/h to 50 km/h in pure electric mode	6
3.14 speed uphill in pure electric mode	6
3.15 speed uphill in hybrid mode	6
3.16 maximum thirty minute speed in hybrid mode	6
3.17 hill starting ability in pure electric mode	6
3.18 hill starting ability in hybrid mode	7
3.19 dynamic loaded radius of a tyre	7
4 Principle	7
5 Parameters, units and tolerance of measurements	7
6 Test conditions	8
6.1 Vehicle conditions	8
6.2 Atmospheric conditions	8
6.3 Road conditions	8
7 Preconditioning of the vehicle	9
7.1 Charge	9
7.2 Trip meter setting	10
7.3 Warm-up	10
8 Test sequence	11
9 Test procedure	11
9.1 Maximum speed in hybrid mode	11
9.2 Maximum speed in pure electric mode	12
9.3 Acceleration 0 km/h to 100 km/h	12
9.4 Acceleration 0 km/h to 50 km/h in pure electric mode	12
9.5 Speed uphill in pure electric mode	12
9.6 Speed uphill in hybrid mode	13
9.7 Maximum thirty minute speed in hybrid mode	13
9.8 Hill starting ability in pure electric mode	13
9.9 Hill starting ability in hybrid mode	15
10 Test report	15

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 September 1999, and conflicting national standards shall be withdrawn at the latest by September 1999.

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.

The European Standard prEN 1821 applies to measurement of road operating ability of electrically propelled road vehicles and comprises the following parts :

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

1 Scope

This standard specifies the principles, conditions and procedures of the test methods to measure the road performances of the partially electrically propelled road vehicles (Hybrid vehicles).

This standard is applicable to the concept of road performances which comprises the notions of speed, acceleration, hill climbing ability.

This standard applies to the international categories of vehicles M_1 , M_2 , M_3 , N_1 , N_2 , N_3 ¹⁾, and to motor tricycles and quadricycles²⁾ from the motorcycles types.

This standard does not apply to pure electric propelled road vehicles.

2 Normative reference

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.

EN 1821-1	1996	Electrically propelled road vehicles – Measurement of road operating ability – Part 1 : Pure electric vehicles
ISO 1176	1990	Road vehicles - Masses - Vocabulary and codes.

3 Definitions

For the purpose of this European Standard, the definitions from EN xxxx the following ones apply:

3.1 complete vehicle kerb mass VKM

The definition of ISO-M06 in accordance with ISO 1176 applies.

NOTE The complete vehicle kerb mass VKM includes, in addition to the definition of ISO 1176, the traction battery, on board charger, portable charger or part of it if provided as standard by the manufacturer of the vehicle.

3.2 maximum design total mass MTM

The definition of ISO-M07 in accordance with ISO 1176 applies.

NOTE The maximum design total mass MTM is defined by the vehicle manufacturer.

3.3 test mass

The test mass of the vehicle is the complete vehicle kerb mass plus:

- the total pay load if the pay load including driver is less than 180 kg ;

¹⁾ Categories of vehicles M_1 , M_2 , M_3 , N_1 , N_2 and N_3 are defined in Directive 92/53/EEC.

²⁾ Motor tricycles and quadricycles categories are defined in Directive 92/61/EEC.

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- Looking for additional Standards? Visit Intertek Inform Infostore
 - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-