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**Elektronski dvoplastni kondenzatorji za hibridna električna vozila - Metode za preskušanje električnih karakteristik (IEC 62576:2009)**

Electric double-layer capacitors for use in hybrid electric vehicles - Test methods for electrical characteristics (IEC 62576:2009)

Elektrische Doppelschichtkondensatoren für die Verwendung in Hybridelektrofahrzeugen - Prüfverfahren für die elektrischen Kennwerte (IEC 62576:2009)

Condensateurs électriques à double couche pour véhicules électriques hybrides - Méthodes d'essai des caractéristiques électriques (CEI 62576:2009)

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**Ta slovenski standard je istoveten z: EN 62576:2010**

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**ICS:**

31.060.01	Kondenzatorji na splošno	Capacitors in general
43.120	Električna cestna vozila	Electric road vehicles

**SIST EN 62576:2010****en,fr**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 62576**

April 2010

ICS 31.060.99; 43.120

English version

**Electric double-layer capacitors for use in hybrid electric vehicles -  
Test methods for electrical characteristics  
(IEC 62576:2009)**

Condensateurs électriques à double  
couche pour véhicules électriques  
hybrides -  
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électriques  
(CEI 62576:2009)

Elektrische Doppelschichtkondensatoren  
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Prüfverfahren für die elektrischen  
Kennwerte  
(IEC 62576:2009)

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**CENELEC**

European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**Management Centre: Avenue Marnix 17, B - 1000 Brussels**

## Foreword

The text of document 69/158/CDV, future edition 1 of IEC 62576, prepared by IEC TC 69, Electric road vehicles and electric industrial trucks, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 62576 on 2010-04-01.

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The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2011-01-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2013-04-01

Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of the International Standard IEC 62576:2009 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

- SIST EN 62576:2010  
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- IEC 62391-1:2006 NOTE Harmonized as EN 62391-1:2006 (not modified).
  - IEC 62391-2:2006 NOTE Harmonized as EN 62391-2:2006 (not modified).
  - IEC 62391-2-1:2006 NOTE Harmonized as EN 62391-2-1:2006 (not modified).
-

## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

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.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-1 + A1	1988 1992	Environmental testing - Part 1: General and guidance	EN 60068-1 <sup>1)</sup> -	1994 -

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<sup>1)</sup> EN 60068-1 includes A1 to IEC 60068-1 + corr. October .

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IEC 62576

Edition 1.0 2009-08

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE



**Electric double-layer capacitors for use in hybrid electric vehicles – Test methods for electrical characteristics**

**Condensateurs électriques à double couche pour véhicules électriques hybrides – Méthodes d'essai des caractéristiques électriques**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
ELECTROTECHNIQUE  
INTERNATIONALE

PRICE CODE  
CODE PRIX

U

ICS 31.090.99; 43.120

ISBN 2-8318-1059-2

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ELECTRIC DOUBLE-LAYER CAPACITORS  
FOR USE IN HYBRID ELECTRIC VEHICLES –  
TEST METHODS FOR ELECTRICAL CHARACTERISTICS**

## FOREWORD

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International Standard IEC 62576 has been prepared by IEC technical committee 69: Electric road vehicles and electric industrial trucks.

The text of this standard is based on the following documents:

CDV	Report on voting
69/158/CDV	69/162/RVC

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
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## INTRODUCTION

The Electric double-layer capacitor (EDLC) is a promising energy storage system for hybrid electric vehicles (HEVs), and EDLC-installed HEVs have begun to be commercialized with an eye to improving fuel economy by recovering regenerative energy. Although a standards series (IEC 62391 series) for EDLC already exists, those for HEVs involve patterns of use, usage environment, and values of current that are quite different from those assumed in the existing standards. Standard evaluation and test methods will be useful for both the auto manufacturers and capacitor suppliers to speed up the development and lower the costs of such EDLCs. With these points in mind, this standard aims to provide basic and minimum specifications in terms of the methods for testing electrical characteristics, and to create an environment that supports expanding market of HEVs and large capacity EDLCs. Additional practical test items to be standardized should be reconsidered after technology and market stabilization of EDLCs for HEVs. In terms of endurance that is important in practical use, just basic concept is set forth in the informative annexes.

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