



MALAYSIAN STANDARD

MS IEC 60086-1:2010

**PRIMARY BATTERIES - PART 1: GENERAL
(THIRD REVISION)
(IEC 60086-1:2006, IDT)**

ICS: 29.220.10

Descriptors: primary cells, batteries

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Committee representation

The Industry Standards Committee on Generation, Transmission and Distribution of Electrical Energy (ISC E) under whose authority this Malaysian Standard was adopted, comprises representatives from the following organisations:

Association of Consulting Engineers Malaysia
Department of Standards Malaysia
Federation of Malaysian Manufacturers
Jabatan Kerja Raya Malaysia
Malaysian Association of Standards Users
Malaysian Cable Manufacturers Association
Malaysian Electrical Appliances and Distribution Association
Ministry of Domestic Trade, Co-operatives and Consumerism
Ministry of International Trade and Industry
Persatuan Kontraktor Elektrikal dan Mekanikal Melayu Malaysia
Persatuan Penjana Kuasa Bebas
PETRONAS Research and Scientific Services Sdn Bhd
Pusat Tenaga Malaysia
SIRIM Berhad (Secretariat)
SIRIM QAS International Sdn Bhd
Suruhanjaya Komunikasi dan Multimedia Malaysia
Suruhanjaya Tenaga
Tenaga Nasional Berhad
The Electrical and Electronics Association of Malaysia
The Institution of Engineers, Malaysia
Universiti Teknologi Malaysia

The Technical Committee on Low Voltage Transformer and Storage of Electrical Energy which recommended the adoption of the IEC Standard consists of representatives from the following organisations:

Jabatan Kerja Raya Malaysia
SIRIM Berhad (Secretariat)
SIRIM QAS International Sdn Bhd
Suruhanjaya Tenaga
Tenaga Nasional Berhad
The Electrical and Electronics Association of Malaysia
The Institution of Engineers, Malaysia
TNB Remaco Repair & Maintenance Sdn Bhd
Universiti Malaya
Universiti Teknologi Malaysia

Co-opted members:

Federation of Malaysian Manufacturers
Malaysian Association of Standards Users
Ministry of Domestic Trade, Co-operatives and Consumerism

NATIONAL FOREWORD

The adoption of the IEC Standard as a Malaysian Standard was recommended by the Technical Committee on Low Voltage Transformer and Storage of Electrical Energy under the authority of the Industry Standards Committee on Generation, Transmission and Distribution of Electrical Energy.

This Malaysian Standard is the third revision of MS 66: PART 1, *Primary batteries - Part 1: General*.

This Malaysian Standard is identical with IEC 60086-1:2006, *Primary batteries - Part 1: General*, published by the International Electrotechnical Commission (IEC). However, for the purposes of this Malaysian Standard, the following apply:

- a) in the source text, "this International Standard" should read "this Malaysian Standard";
- b) the comma which is used as a decimal sign (if any), to read as a point; and
- c) reference to International Standards should be replaced by corresponding Malaysian Standards as follows:

Referenced International Standards

Corresponding Malaysian Standards

IEC 60086-2, *Primary batteries - Part 2: Physical and electrical specifications*

MS IEC 60086-2, *Primary batteries - Part 2: Physical and electrical specifications*

IEC 60086-3, *Primary batteries - Part 3: Watch batteries*

MS IEC 60086-3, *Primary batteries - Part 3: Watch batteries*

IEC 60086-4, *Primary batteries - Part 4: Safety of lithium batteries*

MS IEC 60086-4, *Primary batteries - Part 4: Safety of lithium batteries*

IEC 60086-5, *Primary batteries - Part 5: Safety of batteries with aqueous electrolyte*

MS IEC 60086-5, *Primary batteries - Part 5: Safety of batteries with aqueous electrolyte*

This Malaysian Standard cancels and replaces MS 66: PART 1:1999.

Compliance with a Malaysian Standard does not of itself confer immunity from legal obligations.

NOTE. IDT on the front cover indicates an identical standard i.e. a standard where the technical content, structure, and wording (or is an identical translation) of a Malaysian Standard is exactly the same as in an International Standard or is identical in technical content and structure although it may contain the minimal editorial changes specified in clause 4.2 of ISO/IEC Guide 21-1.

INTERNATIONAL ELECTROTECHNICAL COMMISSION

PRIMARY BATTERIES –**Part 1: General****FOREWORD**

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International Standard IEC 60086-1 has been prepared by IEC technical committee 35: Primary cells and batteries.

This tenth edition cancels and replaces the ninth edition (2000) and constitutes a technical revision.

The major technical changes concern the addition of "Test condition tolerances" in 6.6 and the standardization of the "Z" electrochemical system (Nickel oxyhydroxide) included in Table 3.

This bilingual version, published in 2007-03, corresponds to the English version.

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

FDIS	Report on voting
35/1244/FDIS	35/1247/RVD

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

The French version of this standard has not been voted upon.

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

A list of all the parts in the IEC 60086 series, under the general title *Primary batteries*, can be found on the IEC website.

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
- amended.