

Primary batteries - Part 1: General

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 60086-1:2011 sisaldb Euroopa standardi EN 60086-1:2011 ingliskeelset teksti.	This Estonian standard EVS-EN 60086-1:2011 consists of the English text of the European standard EN 60086-1:2011.
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**Primary batteries -
Part 1: General**
(IEC 60086-1:2011)

Piles primaires -
Partie 1: Généralités
(CEI 60086-1:2011)

Primärbatterien -
Teil 1: Allgemeines
(IEC 60086-1:2011)

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC 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 CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

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CENELEC

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

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Foreword

The text of document 35/1270/CDV, future edition 11 of IEC 60086-1, prepared by IEC TC 35, Primary cells and batteries, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60086-1 on 2011-03-24.

This European Standard supersedes EN 60086-1:2007.

The major technical changes with respect to EN 60086-1:2007 are:

- the clarification of the humidity controls for testing various battery types;
- the modification of the standardization guidelines to allow for standardization of electrochemical systems;
- the standardization of the lithium sulfuryl chloride (LiSO_2Cl_2) and lithium sulphur dioxide (LiSO_2) electrochemical systems.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

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) 2011-12-24
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2014-03-24

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60086-1:2011 was approved by CENELEC as a European Standard without any modification.

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 60086-2	2011	Primary batteries - Part 2: Physical and electrical specifications	EN 60086-2	2011
IEC 60086-3	2011	Primary batteries - Part 3: Watch batteries	EN 60086-3	201X ¹⁾
IEC 60086-4	2007	Primary batteries - Part 4: Safety of lithium batteries	EN 60086-4	2007
IEC 60086-5	2011	Primary batteries - Part 5: Safety of batteries with aqueous electrolyte	EN 60086-5	201X ¹⁾
IEC 60410	-	Sampling plans and procedures for inspection by attributes	-	-
ISO/IEC Directives-1 -		Procedures for the technical work	-	-
ISO 3951	Series	Sampling procedures for inspection by variables	-	-

¹⁾ At draft stage.

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INTRODUCTION

The technical content of this part of IEC 60086 provides fundamental requirements and information on primary cells and batteries. All batteries within the IEC 60086 series are considered dry cell batteries. In this sense, IEC 60086-1 is the main component of the IEC 60086 series and forms the basis for the subsequent parts. For example, this part includes elementary information on definitions, nomenclature, dimensions and marking. While specific requirements are included, the content of this part tends to explain methodology (how) and justification (why).

Over the years, this part has been changed to improve its content and remains under continual scrutiny to ensure that the publication is kept up to date with the advances in both battery and battery-powered device technologies.

NOTE Safety information is available in IEC 60086-4, IEC 60086-5 and IEC 62281.

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PRIMARY BATTERIES –

Part 1: General

1 Scope

This part of IEC 60086 is intended to standardize primary batteries with respect to dimensions, nomenclature, terminal configurations, markings, test methods, typical performance, safety and environmental aspects.

As a primary battery classification tool, electrochemical systems are also standardized with respect to system letter, electrodes, electrolyte, nominal and maximum open circuit voltage.

NOTE The requirements justifying the inclusion or the ongoing retention of batteries in the IEC 60086 series are given in Annex A.

The object of IEC 60086-1 is to benefit primary battery users, device designers and battery manufacturers by ensuring that batteries from different manufacturers are interchangeable according to standard form, fit and function. Furthermore, to ensure compliance with the above, this part specifies standard test methods for testing primary cells and batteries.

2 Normative references

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.

IEC 60086-2:2011, *Primary batteries – Part 2: Physical and electrical specifications*

IEC 60086-3:2011, *Primary batteries – Part 3: Watch batteries*

IEC 60086-4:2007, *Primary batteries – Part 4: Safety of lithium batteries*

IEC 60086-5:2011, *Primary batteries – Part 5: Safety of batteries with aqueous electrolyte*

IEC 60410, *Sampling plans and procedures for inspection by attributes*

ISO/IEC Directives, Part 1: *Procedures for the technical work*

ISO 3951(all parts, as applicable), *Sampling procedures*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

application test

simulation of the actual use of a battery in a specific application