

INTERNATIONAL STANDARD

IEC 60086-1

Ninth edition
2000-11

Primary batteries –

Part 1: General

Piles électriques –

*Partie 1:
Généralités*

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

PRIMARY BATTERIES –

Part 1: General

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
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International Standard IEC 60086-1 has been prepared by IEC technical committee 35: Primary cells and batteries.

This ninth edition cancels and replaces the eighth edition and its amendments 1 and 2, published in 1996, and constitutes a technical revision.

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

FDIS	Report on voting
35/1131/FDIS	35/1141/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.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 3.

Annexes A, B, C, D and E form an integral part of this standard.

Annex F, G and H are for information only.

The committee has decided that the contents of this publication will remain unchanged until 2001. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

IEC 60086 consists of the following parts, under the general title: Primary batteries:

- Part 1: General
- Part 2: Physical and electrical specifications¹⁾
- Part 3: Watch batteries
- Part 4: Safety of lithium batteries
- Part 5: Safety of batteries with aqueous electrolyte¹⁾

A bilingual version of this standard may be issued at a later date.

¹⁾ To be published.

INTRODUCTION

The technical content of this part of IEC 60086 provides fundamental requirements and information on primary cells and batteries. In this sense, part 1 is the main component of IEC 60086 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).

The objective 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 a standard form, fit and function. Furthermore, to ensure compliance with the above, this part specifies standard test methods for testing primary cells and batteries.

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. This current revision is the result of a reformatting initiative, as well as some content changes, aimed at making it more user-friendly, less ambiguous, and on a cross-reference basis, fully harmonized with other parts of IEC 60086 (such as IEC 60086-2 and IEC 60086-3).

NOTE Safety information has been removed from IEC 60086-1 and is now available in IEC 60086-4 and IEC 60086-5.

PRIMARY BATTERIES –

Part 1: General

1 Scope

The purpose of this part of IEC 60086 is to standardize primary batteries with respect to their electrochemical system, dimensions, nomenclature, terminal configurations, markings, test methods, typical performance, safety and environmental aspects.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 60086. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of IEC 60086 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.

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

IEC 60086-3:1995, *Primary batteries – Part 3: Watch batteries*

IEC 60086-4:2000, *Primary batteries – Part 4: Safety of lithium batteries*

IEC 60086-5, *Primary batteries – Part 5: Safety of batteries with aqueous electrolyte*²⁾

IEC 60410:1973, *Sampling plans and procedures for inspection by attributes*

IEC 61429:1995, *Marking of secondary cells and batteries with the international recycling symbol ISO 7000-1135*

ISO 3951:1989, *Sampling procedures and charts for inspection by variables for percent non-conforming*

ISO/IEC Directives – Part 2: 1992

²⁾ To be published.