IEC 60068-2-17

Edition 5.0 2023-06

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Environmental testing – Part 2-17: Tests – Test Q: Sealing

Essais d'environnement – Partie 2-17: Essais – Essai Q: Etanchéité

IEC 60068-2-17:2023-06(en-fr)

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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ENVIRONMENTAL TESTING –

Part 2-17: Tests – Test Q: Sealing

FOREWORD

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IEC 60068-2-17 has been prepared by IEC technical committee 104: Environmental conditions, classification and methods of test. It is an International Standard.

This fifth edition cancels and replaces the fourth edition published in 1994. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) "Survey of sealing tests" has been deleted and the relevant content moved to a new Clause 4 "General";
b) the Scope has been revised;
c) the figures have been updated for clarification purposes;
d) all non-SI units have been removed;
e) the information to be given in the relevant specification has been revised.

The text of this International Standard is based on the following documents:

Draft	Report on voting
104/984/FDIS	104/1000/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts in the IEC 60068 series, published under the general title *Environmental testing*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

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- withdrawn,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

ENVIRONMENTAL TESTING –

Part 2-17: Tests – Test Q: Sealing

1 Scope

This part of IEC 60068 deals with seal tests applicable to the external and internal detection in container sealing of gross leaks and fine leaks to determine the effectiveness of seals of specimens. For further tests to verify the ability of enclosures, covers and seals to maintain components and equipment in good working order, IEC 60068-2-18 can be helpful.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

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

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- IEC Electropedia: available at https://www.electropedia.org/
- ISO Online browsing platform: available at https://www.iso.org/obp

3.1
leak rate
quantity of a dry gas at a given temperature that flows through a leak per unit of time and for a known difference of pressure across the leak

3.2
standard leak rate
leak rate under standard conditions of temperature and pressure difference of 25 °C and 10^5 Pa

3.3
measured leak rate
R
leak rate of a given device as measured under specified conditions and employing a specified test gas

Note 1 to entry: Measured leak rates are often determined with helium employed as the test gas under a pressure difference of 10^5 Pa at 25 °C. For the purpose of comparison with leak rates determined by other methods of testing, the leak rates should be converted to equivalent standard leak rates.

3.4
equivalent standard leak rate
L
standard leak rate of a given device with air as the test gas

Note 1 to entry: The equivalent standard leak rate is expressed in Pa · cm^3/s.