IEC 61300-2-26

Edition 3.0 2023-07

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Fibre optic interconnecting devices and passive components – Basic test and measurement procedures –
Part 2-26: Tests – Salt mist

Dispositifs d'interconnexion et composants passifs fibroniques – Procédures fondamentales d'essais et de mesures –
Partie 2-26: Essais – Brouillard salin



IEC 61300-2-26:2023-07(en-fr)



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – BASIC TEST AND MEASUREMENT PROCEDURES –

Part 2-26: Tests – Salt mist

FOREWORD

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IEC 61300-2-26 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics. It is an International Standard.

This third edition cancels and replaces the second edition published in 2006. This edition constitutes a technical revision.

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

a) addition of Clause 3, Terms and definitions;
b) harmonisation with IEC 61753-1:2018 and addition of Table 2;

c) harmonisation with IEC 60068-2-11:2021.

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

Draft	Report on voting
86B/4764/FDIS	86B/4777/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 of the IEC 61300 series, published under the general title *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures,* 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- withdrawn,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.

FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – BASIC TEST AND MEASUREMENT PROCEDURES –

Part 2-26: Tests – Salt mist

1 Scope

This part of IEC 61300 provides a test to determine the corrosion resistance of the metals used in the construction of fibre optic interconnecting devices and passive components. This document determines if dissimilar metals have been well finished to prevent corrosion. The requirements of the tests for these devices are defined in IEC 61753-1.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 60068-2-11:2021, *Environmental testing – Part 2: Tests – Test Ka: Salt mist*

IEC 61300-1, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 1: General and guidance*

IEC 61300-2-38, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-38: Tests – Sealing for pressurized fibre optic closures*

IEC 61300-3-1, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-1: Examinations and measurements – Visual examination*

IEC 61300-3-3, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-3: Examinations and measurements – Active monitoring of changes in attenuation and return loss*

IEC 61300-3-35, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-35: Examinations and measurements – Visual inspection of fibre optic connectors and fibre-stub transceivers*

IEC 61753 (all parts), *Fibre optic interconnecting devices and passive components – Performance standard*

IEC 62005 (all parts), *Fibre optic interconnecting devices and passive components – Reliability*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 61300-1 apply.

ISO and IEC maintain terminological 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

4 General description

WARNING – This document can involve hazardous materials, operations and equipment. This document does not propose to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this document to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

This procedure is conducted in accordance with IEC 60068-2-11, test Ka. The device under test (DUT) is exposed to a salt mist environment within a test chamber maintained at a temperature of (35 ± 2) °C.

The relationship between the deterioration provided by this test and long-term exposure of products to salt laden atmospheres cannot be readily determined. But it provides a useful means of comparing resistance of products to deterioration from salt laden atmospheres.

5 Salt solution

5.1 Preparation of salt solution

The salt solution concentration shall be (5 ± 1) % by weight. The solution shall be prepared by dissolving (5 ± 1) parts by weight of salt in 95 parts by weight of distilled or deionized water with a conductivity not higher than 20 µS/cm at (25 ± 2) °C. The sodium chloride concentration of the sprayed solution collected shall be (5 ± 1) % by weight. The specific gravity range for a 5 % by weight salt solution concentration is 1,029 to 1,036 at 25 °C.

The sodium chloride shall not contain a mass fraction of the heavy metals copper (Cu), nickel (Ni), and lead (Pb) in total more than 0,005 %. It shall not contain a mass fraction of sodium iodide more than 0,1 % and a mass fraction of total impurities more than 0,5 %, calculated for dry salt.

5.2 pH adjustment

If necessary, adjust the pH of the salt solution so that pH of the sprayed solution collected within the test chamber is 6,5 to 7,2 at (25 ± 2) °C. Check the pH using electrometric measurement. Measurements of pH shall be done using electrodes suitable for measuring in weakly buffered sodium chloride solution in deionized water.

Make any necessary corrections by adding hydrochloric acid, sodium hydroxide or sodium bicarbonate solution of analytical grade.

5.3 Filtration

If necessary, filter the solution before placing it in the reservoir of the apparatus, to remove any solid matter which might block the apertures of spraying device.