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BASIC SAFETY PUBLICATION

PUBLICATION FONDAMENTALE DE SÉCURITÉ

Environmental testing – Part 2-10: Tests – Test J and guidance: Mould growth

Essais d'environnement – Partie 2-10: Essais – Essai J et guide: Moisissures

IEC 60068-2-10:2005-06+AMD1:2018-04 CSV(en-fr)

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FOREWORD

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This Consolidated version of IEC 60068-2-10 bears the edition number 6.1. It consists of the sixth edition (2005-06) [documents 104/365/FDIS and 104/373/RVD] and its amendment 1 (2018-04) [documents 104/740/CDV and 104/790/RVC]. The technical content is identical to the base edition and its amendment.

In this Redline version, a vertical line in the margin shows where the technical content is modified by amendment 1. Additions are in green text, deletions are in strikethrough red text. A separate Final version with all changes accepted is available in this publication.

International Standard IEC 60068-2-10 has been prepared by IEC technical committee 104: Environmental conditions, classification and methods of test.

This sixth edition constitutes a technical revision.

The main changes with respect to the previous edition are listed below:

– Two test fungi replaced by two others
– Concentration of the spores defined for each test fungus
– Spores suspension in mineral salt solution additionally introduced
– Pre-conditioning of the specimens by damp heat storage prescribed
– Supersonic aerosolization of the spores suspension as the preferred inoculation method introduced
– Duration of incubation reduced from 84 days to 56 days
– Extent of mould growth grade 2 split into grade 2a and grade 2b
– Detailed information on methods of inoculation given in Annex B
– Annex E: flow-chart deleted

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

It has the status of a basic safety publication in accordance with IEC Guide 104.

This standard forms Part 2-10 of IEC 60068 which consists of the following major parts, under the general title *Environmental testing*:

Part 1: General and guidance
Part 2: Tests
Part 3: Supporting documentation and guidance
Part 4: Information for specification writers
Part 5: Guide to drafting of test methods

The committee has decided that the contents of the base publication and its amendment will remain unchanged until the stability 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

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ENVIRONMENTAL TESTING –

Part 2-10: Tests – Test J and guidance: Mould growth

1 Scope

This part of IEC 60068 provides a test method for determining the extent to which electrotechnical products support mould growth and how any mould growth may affect the performance and other relevant properties of the product.

Since mould growth conditions include high relative humidity, the test is applicable to electrotechnical products intended for transportation, storage and use under humid conditions over a period of some days at least.

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.

ISO/IEC 17025:1999, *General requirements for the competence of testing and calibration laboratories*

ISO 846:1997, *Plastics – Evaluation of the action of microorganisms*

MIL–STD–810 F:2000, *Method 508.5 Fungus*

Laboratory Biosafety Manual 2nd Ed., WHO 1993, ISBN 92 4 1544503

3 General description

~~This test covers the inoculation of electrotechnical products with a selection of mould spores followed by a period of incubation under conditions which promote spore germination and the growth of mould.~~

~~Two variations of the test are given. Variant 1 specifies inoculation of the specimen with the mould spores without nutrients whereas variant 2 specifies the inoculation with the mould spores suspended in a nutritive solution which supports mould growth.~~

~~It is advisable to use testing procedures such as specified for plastics in ISO 846 to assess the vulnerability to damage by mould growth of the constructional materials used.~~

~~NOTE Laboratories for microbiological testing of technical products should be accredited in accordance with ISO/IEC 17025. See further Annex F.~~

3.1 Background

Under certain climatic and environmental conditions, micro-organisms may settle on and colonize the surface of electrotechnical equipment. Their presence or their metabolic products may not only damage the equipment itself, but may also affect the equipment's operability and serviceability. The actions of micro-organisms on equipment are influenced by two different processes: direct action in which the deterioration of material serve as a nutritive substance