



**International
Standard**

ISO 6270-2

**Paints and varnishes —
Determination of resistance to
humidity —**

**Part 2:
Condensation (in-cabinet exposure
with heated water reservoir)**

*Peintures et vernis — Détermination de la résistance à
l'humidité —*

*Partie 2: Condensation (exposition en enceinte avec réservoir à
eau chauffée)*

**Third edition
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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 35, *Paints and varnishes*, Subcommittee SC 9, *General test methods for paints and varnishes*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 139, *Paints and varnishes*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 6270-2:2017) and ISO 11503:1995, which have been technically revised.

The main changes are as follows:

- intermittent condensation (IC) cycle from ISO 11503 has been added;
- chamber ventilation and specimen loading requirements have been clarified;
- spacing requirements for specimens have been changed from required to recommendations, and the objective of spacing has been clarified;
- a simplified procedure has been added for condensation verification, and the previous procedure has been moved to [Annex A](#);
- the normative references have been updated.

A list of all parts in the ISO 6270 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document is intended to give consistent conditions and procedures for the conditioning of pre-prepared test specimens which are evaluated for defects. Such defects can develop when they are subjected to humid ambient atmospheres such as constant condensation-water atmospheres or alternating condensation-water atmospheres.

The tests are designed to clarify the behaviour of the test specimens in humid ambient atmospheres and to pinpoint any defects in the protection of the test specimens against corrosion. The testing of coatings in these atmospheres does not necessarily give lifetime prediction data.

After conditioning, the test specimens are evaluated either according to agreed documents [e.g. the appropriate part(s) of the ISO 4628 series] or by procedures agreed between the interested parties.

Paints and varnishes — Determination of resistance to humidity —

Part 2: Condensation (in-cabinet exposure with heated water reservoir)

1 Scope

This document specifies the general conditions and procedures observed when testing coated test specimens by exposing them to constant condensation-water atmospheres or alternating condensation-water atmospheres, in a cabinet with a heated water reservoir. These conditions and procedures ensure that the results of tests carried out in different laboratories are reproducible.

This document does not cover the shape and preparation of the test specimens, the duration of the test and the assessment of the test results.

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.

ISO 3270, *Paints and varnishes and their raw materials — Temperatures and humidities for conditioning and testing*

ISO 4618, *Paints and varnishes — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4618 apply.

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

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

4 Designation

The condensation-water test atmospheres are designated as follows:

Test atmosphere	CH	Condensation atmosphere with constant humidity
	AHT	Condensation atmosphere with alternating humidity and air temperature
	AT	Condensation atmosphere with alternating air temperature
	IC	Intermittent condensation