BSI Standards Publication

# Paints and varnishes - Determination of resistance to humidity

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

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# National foreword

This British Standard is the UK implementation of EN ISO 6270-2:2018. It is identical to ISO 6270-2:2017. It supersedes BS EN ISO 6270-2:2005, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee STI/10, Test methods for paints.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.


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**Compliance with a British Standard cannot confer immunity from legal obligations.**

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EUROPEAN STANDARD EN ISO 6270-2

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English Version

# Paints and varnishes - Determination of resistance to humidity - Part 2: Condensation (in-cabinet exposure with heated water reservoir) (ISO 6270-2:2017)

Peintures et vernis - Détermination de la résistance à l'humidité - Partie 2: Condensation (exposition en enceinte avec réservoir à eau chauffée) (ISO 6270-2:2017)

Beschichtungsstoffe - Bestimmung der Beständigkeit gegen Feuchtigkeit - Teil 2: Kondensation (Beanspruchung in einer Klimakammer) (ISO 6270-2:2017)

This European Standard was approved by CEN on 25 November 2017.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

# European foreword

This document (EN ISO 6270-2:2018) has been prepared by Technical Committee ISO/TC 35/SC 9 “General test methods for paints and varnishes” in collaboration with Technical Committee CEN/TC 139 “Paints and varnishes” the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by July 2018, and conflicting national standards shall be withdrawn at the latest by July 2018.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 6270-2:2005.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

**Endorsement notice**

The text of ISO 6270-2:2017 has been approved by CEN as EN ISO 6270-2:2018 without any modification.

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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 documents 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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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on 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 the following URL: 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*.

This second edition cancels and replaces the first edition (ISO 6270-2:2005), which has been technically revised.

The main changes compared to the previous edition are as follows:

— a principle clause has been added;

— the terms and definitions clause has been added;

— a limitations clause concerning the use of other than standard test conditions has been added;

— the recommendation to use distilled or deionized water for filling the trough has been changed;

— a requirement has been added to make sure that condensation forms on all test specimens;

— a method for the determination of the comparison quantity of condensation water has been added;

— information on precision has been added;

— the normative references have been updated.

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

 

# Introduction

This document is intended to give consistent conditions and procedures for the conditioning of pre-prepared test specimens which are to be evaluated for defects, which may 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 in accordance with agreed documents, such as the appropriate part(s) of ISO 4628[1] or by procedures agreed between the interested parties.

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# 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 which need to be observed when testing coated test specimens in constant condensation-water atmospheres or in alternating condensation-water atmospheres, in order to ensure that the results of tests carried out in different laboratories are reproducible.

NOTE The shape and preparation of the test specimens, the duration of the test and the assessment of the test results are not covered in this document.

## 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 — Terms and definitions*

## 3 Terms and definitions

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

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

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

## 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 |