



BSI Standards Publication

## Corrosion of metals and alloys — Classification of low corrosivity of indoor atmospheres

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Part 3: Measurement of environmental parameters affecting indoor corrosivity

This is a preview of "BS EN ISO 11844-3:20...". [Click here to purchase the full version from the ANSI store.](#)

## National foreword

This British Standard is the UK implementation of EN ISO 11844-3:2020. It is identical to ISO 11844-3:2020. It supersedes BS EN ISO 11844-3:2008, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee ISE/NFE/8, Corrosion of metals and alloys.

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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## Corrosion of metals and alloys — Classification of low corrosivity of indoor atmospheres — Part 3: Measurement of environmental parameters affecting indoor corrosivity (ISO 11844-3:2020)

Corrosion des métaux et alliages — Classification de la corrosivité faible des atmosphères d'intérieur — Partie 3: Mesurage des paramètres environnementaux affectant la corrosivité des atmosphères d'intérieur (ISO 11844-3:2020)

Korrosion von Metallen und Legierungen — Einteilung der Korrosivität in Räumen mit geringer Korrosivität — Teil 3: Messung der Umgebungsparameter, die Korrosivität in Räumen beeinflussen (ISO 11844-3:2020)

This European Standard was approved by CEN on 21 December 2019.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

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## European foreword

This document (EN ISO 11844-3:2020) has been prepared by Technical Committee ISO/TC 156 "Corrosion of metals and alloys" in collaboration with Technical Committee CEN/TC 262 "Metallic and other inorganic coatings, including for corrosion protection and corrosion testing of metals and alloys" the secretariat of which is held by BSI.

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 2020, and conflicting national standards shall be withdrawn at the latest by July 2020.

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 11844-3:2008.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

### Endorsement notice

The text of ISO 11844-3:2020 has been approved by CEN as EN ISO 11844-3:2020 without any modification.

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## Contents

|   | Page      |
|---|-----------|
| <b>Foreword</b> .....   | <b>iv</b> |
| <b>Introduction</b> .....   | <b>v</b>  |
| <b>1 Scope</b> .....  | <b>1</b>  |
| <b>2 Normative references</b> .....   | <b>1</b>  |
| <b>3 Terms and definitions</b> .....  | <b>1</b>  |
| <b>4 Principle</b> .....  | <b>1</b>  |
| <b>5 Environmental parameters</b> .....   | <b>1</b>  |
| <b>6 Humidity and temperature parameters</b> .....                                    | <b>2</b>  |
| 6.1 Relative humidity.....  | 2         |
| 6.2 Temperature.....  | 2         |
| 6.3 Temperature–humidity complex.....   | 2         |
| <b>7 Airborne gas contaminants</b> .....  | <b>2</b>  |
| 7.1 Principle.....  | 2         |
| 7.2 Placing of measuring equipment.....   | 3         |
| 7.2.1 General.....  | 3         |
| 7.2.2 Continuous gas-measuring instruments.....                                       | 3         |
| 7.2.3 Active sampler.....   | 3         |
| 7.2.4 Passive sampler.....  | 3         |
| 7.2.5 Gas-deposition equipment.....   | 3         |
| 7.3 Measuring methods and duration.....   | 3         |
| 7.3.1 Continuous measurement.....   | 3         |
| 7.3.2 Measurement and calculation with the active sampler.....                        | 3         |
| 7.3.3 Measurement and calculation with the passive sampler.....                       | 4         |
| 7.3.4 Measurement and calculation of deposition rate of gas pollution.....            | 5         |
| <b>8 Airborne particle contaminants</b> .....   | <b>6</b>  |
| 8.1 Principle.....  | 6         |
| 8.2 Volumetric measurements.....  | 6         |
| 8.3 Measurement of particle deposits.....   | 6         |
| <b>9 Dry deposition velocity and measurements of air flow</b> .....                   | <b>7</b>  |
| <b>Annex A (informative) Reagents used for both passive and active samplers</b> ..... | <b>8</b>  |
| <b>Bibliography</b> .....   | <b>10</b> |

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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](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

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

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](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 156, *Corrosion of metals and alloys*.

This second edition cancels and replaces the first edition (ISO 11844-3:2006), which has been technically revised. The main changes compared with the previous edition are as follows:

- the normative references have been updated;
- a reference to ISO 16000 in [Clause 5](#) has been added;
- the detection limits in [7.3.1](#) and [7.3.2](#) have been updated;
- a new [Clause 9](#) has been added.

A list of all parts in the ISO 11844 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](http://www.iso.org/members.html).

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## Introduction

This document deals with environmental parameters for the characterization of indoor atmospheres and methods of measurement.

The environmental parameters for the characterization of indoor atmospheres include more airborne contaminants than are normally used for the characterization of the outdoor environment.

Measurement of environmental parameters is a way of characterizing the corrosivity of the indoor atmosphere and will always be required if it is necessary to consider measures for reducing the corrosivity.

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# Corrosion of metals and alloys — Classification of low corrosivity of indoor atmospheres —

## Part 3: Measurement of environmental parameters affecting indoor corrosivity

### 1 Scope

This document specifies methods for measuring the environmental parameters used to classify the corrosivity of indoor atmospheres on metals and alloys.

### 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 7708, *Air quality — Particle size fraction definitions for health-related sampling*

EN 12341, *Ambient air — Standard gravimetric measurement method for the determination of the PM<sub>10</sub> or PM<sub>2,5</sub> mass concentration of suspended particulate matter*

### 3 Terms and definitions

No terms and definitions are listed in this document.

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

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

### 4 Principle

Different combinations of parameters affect the corrosivity of indoor atmospheres. Knowledge about possible sources of environmental effects shall be obtained before decisions regarding the type of measurements needed are taken. The characterization of indoor atmospheric corrosivity using environmental parameters is more complicated than measuring the corrosivity with metal specimens. However, in many cases, the measurement of environmental parameters can give a good indication of how to establish the corrosivity of an environment and will, in combination with the information given in ISO 11844-1, give a good indication of the corrosivity categories for the materials in the selected environment.

### 5 Environmental parameters

In indoor atmospheres, corrosion processes are characterized by a more complex group of parameters than in outdoor atmospheres. In general, three groups of parameters should be measured:

- a) humidity and temperature;