



NSAI
Standards

Irish Standard
I.S. EN ISO 11844-2:2020

Corrosion of metals and alloys -
Classification of low corrosivity of indoor
atmospheres - Part 2: Determination of
corrosion attack in indoor atmospheres
(ISO 11844-2:2020)

I.S. EN ISO 11844-2:2020

Incorporating amendments/corrigenda/National Annexes issued since publication:

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National Foreword

I.S. EN ISO 11844-2:2020 is the adopted Irish version of the European Document EN ISO 11844-2:2020, Corrosion of metals and alloys - Classification of low corrosivity of indoor atmospheres - Part 2: Determination of corrosion attack in indoor atmospheres (ISO 11844-2:2020)

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EUROPEAN STANDARD

EN ISO 11844-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2020

ICS 77.060

Supersedes EN ISO 11844-2:2008

English Version

**Corrosion of metals and alloys - Classification of low
corrosivity of indoor atmospheres - Part 2: Determination
of corrosion attack in indoor atmospheres (ISO 11844-
2:2020)**

Corrosion des métaux et alliages - Classification de la
corrosivité faible des atmosphères d'intérieur - Partie
2: Détermination de l'attaque par corrosion dans les
atmosphères d'intérieur (ISO 11844-2:2020)

Korrosion von Metallen und Legierungen - Einteilung
der Korrosivität in Räumen mit geringer Korrosivität -
Teil 2: Bestimmung der korrosiven Belastung in
Räumen (ISO 11844-2:2020)

This European Standard was approved by CEN on 26 April 2020.

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

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

EN ISO 11844-2:2020 (E)

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European foreword

This document (EN ISO 11844-2:2020) 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 December 2020, and conflicting national standards shall be withdrawn at the latest by December 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 11844-2:2008.

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Endorsement notice

The text of ISO 11844-2:2020 has been approved by CEN as EN ISO 11844-2:2020 without any modification.

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INTERNATIONAL STANDARD

ISO 11844-2

First edition
2005-12-15

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

Part 2: Determination of corrosion attack in indoor atmospheres

*Corrosion des métaux et alliages — Classification de la corrosivité
faible des atmosphères d'intérieur —*

*Partie 2: Détermination de l'attaque par corrosion dans les atmosphères
d'intérieur*



Reference number
ISO 11844-2:2005(E)

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ISO 11844-2:2005(E)

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

ISO 11844-2 was prepared by Technical Committee ISO/TC 156, *Corrosion of metals and alloys*.

ISO 11844 consists of the following parts, under the general title *Corrosion of metals and alloys — Classification of low corrosivity of indoor atmospheres*:

- *Part 1: Determination and estimation of indoor corrosivity*
- *Part 2: Determination of corrosion attack in indoor atmospheres*
- *Part 3: Measurement of environmental parameters affecting indoor corrosivity*

Introduction

This part of ISO 11844 describes standard specimens, their exposure and evaluation for the derivation of the indoor corrosivity categories.

The determination of the corrosion attack is, at the present state of knowledge, the most reliable way, and usually also an economical way, for evaluation of corrosivity taking into account all main local environmental influences.

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

Part 2: Determination of corrosion attack in indoor atmospheres

1 Scope

This part of ISO 11844 specifies methods for determination of corrosion rate with standard specimens of metals in indoor atmospheres with low corrosivity. For this direct method of evaluation of corrosivity, different sensitive methods can be applied using standard specimens of the following metals: copper, silver, zinc and steel. The values obtained from the measurements are used as classification criteria for the determination of indoor atmospheric corrosivity.

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.

IEC 60654-4:1987, *Operating conditions for industrial-process measurement and control equipment — Part 4: Corrosive and erosive influences*

ANSI/ISA-S71.04:1985, *Environmental conditions for Process, Measurement and Control Systems: Airborne Contaminants*

3 Principle

The corrosivity of the indoor location, e.g. control rooms, electric boxes, storage rooms, during transportation, in museums, etc., is determined from the corrosion rate calculated from the mass change or resistance change per unit area of standard specimens of metals after exposure for a certain time period. Different materials are sensitive to different environmental parameters or their combinations.

4 Methods

The following methods described in Annexes A and B are available for evaluation of the corrosion attack:

- Determination of corrosion rate by mass change measurements (Annex A)
- Determination of corrosion rate by electrolytic cathodic reduction (Annex B)

The method described in informative Annex C is suitable for continuous or periodic monitoring of the corrosion attack:

- Determination of corrosion rate by resistance measurements (Annex C)

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