

Wood-based panels - Determination of formaldehyde release - Part 3: Gas analysis method (ISO 12460-3:2023)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>See Eesti standard EVS-EN ISO 12460-3:2023 sisaldab Euroopa standardi EN ISO 12460-3:2023 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 20.09.2023.</p> <p>Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.</p>	<p>This Estonian standard EVS-EN ISO 12460-3:2023 consists of the English text of the European standard EN ISO 12460-3:2023.</p> <p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 20.09.2023.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
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ICS 79.060.01

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English Version

Wood-based panels - Determination of formaldehyde
release - Part 3: Gas analysis method (ISO 12460-3:2023)

Panneaux à base de bois - Détermination du
dégagement de formaldéhyde - Partie 3: Méthode
d'analyse de gaz (ISO 12460-3:2023)

Holzwerkstoffe - Bestimmung der Formaldehydabgabe
- Teil 3: Gasanalyse-Verfahren (ISO 12460-3:2023)

This European Standard was approved by CEN on 6 August 2023.

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

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European foreword

This document (EN ISO 12460-3:2023) has been prepared by Technical Committee ISO/TC 89 "Wood-based panels" in collaboration with Technical Committee CEN/TC 112 "Wood-based panels" 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of an identical text or by endorsement, at the latest by March 2024, and conflicting national standards shall be withdrawn at the latest by March 2024.

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 12460-3:2020.

Any feedback and questions on this document should be directed to the users' national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

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, Türkiye and the United Kingdom.

Endorsement notice

The text of ISO 12460-3:2023 has been approved by CEN as EN ISO 12460-3:2023 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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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 89, *Wood based panels*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 112, *Wood based panels*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This fourth edition cancels and replaces the third edition (ISO 12460-3:2020), which has been technically revised.

The main changes are as follows:

- laser spectroscopy introduced as a further analytical procedure;
- ready to use formaldehyde standards considered in [8.4.4.3](#).

A list of all parts in the ISO 12460 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.

Wood-based panels — Determination of formaldehyde release —

Part 3: Gas analysis method

1 Scope

This document specifies a procedure for determination of accelerated formaldehyde release from uncoated and coated wood-based panels using the gas analysis method. The procedure is also suitable for the testing of other materials (e.g. edge bands, floor coverings, foams, foils, laminated wood products, veneered wood products, coated wood products).

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 16979, *Wood-based panels — Determination of moisture content*

ISO 16999, *Wood-based panels — Sampling and cutting of test pieces*

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 <https://www.electropedia.org/>

4 Principle

A test piece of known surface area is placed in a closed chamber in which the temperature, humidity, airflow, and pressure are controlled to defined values. Formaldehyde released from the test pieces mixes with the air in the chamber. This air is continually drawn from the chamber and passes through gas wash bottles, containing water, which absorbs the released formaldehyde. At the end of the test, the formaldehyde concentration is determined photometrically or fluorimetrically. The formaldehyde release is calculated from this concentration, the sampling time, and the exposed area of the test pieces and is expressed in milligrams per square meter and hour ($\text{mg}/\text{m}^2\cdot\text{h}$).

5 Reagents

Reagents of recognized analytical purity and distilled or demineralised water (referred throughout the following text as distilled water) shall be used for the analysis.

5.1 4 ml acetylacetone solution are added to a 1 000 ml volumetric flask and made up to the mark with distilled water.