
**Wood-based panels — Determination of
formaldehyde release —**

**Part 1:
Formaldehyde emission by
the 1-cubic-metre chamber method**

*Panneaux à base de bois — Détermination du dégagement de
formaldéhyde —*

*Partie 1: Méthode du dégagement de formaldéhyde en chambre de
1 mètre cube*



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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.

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.

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.

ISO 12460-1 was prepared by Technical Committee ISO/TC 89, *Wood-based panels*.

ISO 12460 consists of the following parts, under the general title *Wood-based panels — Determination of formaldehyde release*:

- *Part 1: Formaldehyde emission by the 1-cubic-metre chamber method*
- *Part 2: Small-scale chamber method*
- *Part 3: Gas analysis method*
- *Part 4: Desiccator method*

Introduction

The 1 m³-chamber is the reference method for the determination of formaldehyde release. For factory production control, the following regional or national derived test methods are used:

- perforator method, as described in EN 120;
- dessicator method, as described in ISO 12460-4;
- gas analysis method, as described in ISO 12460-3;
- flask method, as described in EN 717-3;
- small-chamber method, as described in ISO 12460-2 (ASTM D6007).

Round-robin tests have shown good correlations between the 1 m³ chamber, and large and small test chambers.

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Wood-based panels — Determination of formaldehyde release —

Part 1:

Formaldehyde emission by the 1-cubic-metre chamber method

1 Scope

This part of ISO 12460 specifies a 1 m³ chamber method for the determination of the formaldehyde emission from wood-based panels under defined conditions, relating to typical conditions in real-life.

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.

ISO 16000-3, *Indoor air — Determination of formaldehyde and other carbonyl compounds — Active sampling method*

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

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

volume of the chamber

total air volume of the unloaded chamber, including recirculating ventilation ducts

NOTE The volume of the chamber is expressed in units of cubic metres.

3.2

loading factor

ratio of the total surface area of the test piece, excluding the area of the edges, to the volume of the chamber

NOTE The loading factor is expressed in units of square metres per cubic metre.

3.3

air exchange rate

quotient of air volume going through the chamber per hour and the volume of the chamber

NOTE The air exchange rate is expressed in units of cubic metres of air per hour per cubic metre of volume of the chamber.