INTERNATIONAL STANDARD

ISO 12460-4

Second edition
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Wood-based panels — Determination of formaldehyde release —

Part 4: Desiccator method

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

Partie 4: Méthode au dessiccateur

Reference number
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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 on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 89, *Wood-based panels.*

This second edition cancels and replaces the first edition (ISO 12460-4:2008), which has been technically revised with the following changes:

a) introduction was deleted;

b) reference to JANS 16 was deleted in the scope;

c) provisions for low emitting boards were added in 5.6.

It also incorporates the Amendment ISO 12460-4:2008/Amd 1:2011.

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 3: Gas analysis method*

— *Part 4: Desiccator method*

— *Part 5: Extraction method (called the perforator method)*

Wood-based panels — Determination of formaldehyde release —

Part 4: Desiccator method

1 Scope

This part of ISO 12460 specifies a desiccator method for the determination of the quantity of formaldehyde emitted from particleboard, fibreboard, plywood, oriented strand board (OSB) and wooden laminated flooring.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

3 Principle

Emission of formaldehyde is determined by placing test pieces of known surface area in a desiccator at a controlled temperature and measuring the quantity of emitted formaldehyde absorbed in a specified volume of water during 24 h.

4 Reagents

Use only reagents of recognized analytical grade, unless otherwise specified, and distilled or demineralized water or water of equivalent purity.

4.1 Acetylacetone-ammonium acetate solution.

Dissolve 150 g ammonium acetate ($C_2H_3O_2NH_4$) in 800 ml water in a 1 000 ml one-mark volumetric flask (5.9). Add 3 ml glacial acetic acid ($C_2H_4O_2$) and 2 ml acetylacetone (pentane-2,4-dione, $C_5H_8O_2$) and mix thoroughly into the solution. Make up to the mark with water. During storage, protect the solution from light. Discard the solution 3 days after preparation.

4.2 Iodine standard solution, $c(I_2)$ = 0,05 mol/l.

Standardize the solution before use.

4.3 Sodium thiosulfate standard solution, $c(Na_2S_2O_3)$ = 0,1 mol/l.

Standardize the solution before use.

4.4 Sodium hydroxide standard solution, $c(NaOH)$ = 1 mol/l.

Standardize the solution before use.