
**Wood-based panels — Determination of
moisture resistance — Boil test**

*Panneaux à base de bois — Détermination de la résistance à
l'humidité — Essai à l'eau bouillante*



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Published in Switzerland

Foreword

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ISO 16998 was prepared by Technical Committee ISO/TC 89, *Wood-based panels*. ISO 16998 is based on European Standard EN 1087-1.

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Wood-based panels — Determination of moisture resistance — Boil test

1 Scope

This International Standard specifies a method of test for evaluating the bond quality of particleboards, OSB and fibreboards, intended for use in humid conditions.

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 9424, *Wood-based panels — Determination of dimensions of test pieces*

ISO 12466-2, *Plywood — Bonding quality — Part 2: Requirements*

ISO 16984, *Wood-based panels — Determination of tensile strength perpendicular to the plane of the board*

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

3 Principle

Tensile strength, perpendicular to the plane of the panel (internal bond), is determined using test pieces which have been immersed in boiling water.

4 Apparatus

4.1 Sliding caliper, as specified in ISO 9424.

4.2 Laboratory water bath, temperature controlled, capable of raising the contents to boiling point at a specified rate (see 6.1) and maintaining boiling for not less than 2 h.

The heating zone should be separated from the immersed sample by baffles or by the use of separate chambers. This will prevent erosion of the test pieces by air bubbles or strong water flows. A level control device (e.g. float chamber) may also be required to maintain the water level as water will be lost due to vaporization. A back-flow connection between the water bath and the float chamber will also ensure preheating of water entering the water bath from the float chamber.

4.3 Testing machine, as described in ISO 16984.

4.4 Testing blocks, of metal, hardwood or hardwood plywood), compatible with the fixing device, to which the test pieces are to be bonded (see Figure 1). Hardwood or hardwood plywood shall have a density greater than 600 kg/m³.

When thin panels (of thickness less than 8 mm) or high-density panels (greater than 800 kg/m³) are tested, metal blocks shall be used.

4.5 Oven, air-circulating, capable of maintaining an internal temperature of (70 ± 2) °C.