

**DETERMINATION OF DENSITY AND THICKNESS OF BOARDS AND
WEIGHT PER UNIT AREA OF COATED BOARDS****Application**

This method is used to determine the density and thickness of boards, hardboards and pulp moulded fibre boards and also the weight per unit area of coated boards.

Apparatus Required

1. Cutting device for boards to give a specimen 100 +/- 0.1 x 100 +/- 0.1 mm in size.
2. Analytical Balance accuracy +/- 0.1 mg.
3. Thickness measurement gauge with circular contact plates of approximately 2 cm² and a preload of 2 kg.

Conditioning and Test Conditions

All test values indicated herein are based on material conditioned in a controlled atmosphere of 23 +/- 2 °C and 50 +/- 5 % relative humidity for not less than 24 h prior to testing and tested under the same conditions unless otherwise specified.

Procedure

1. Cut from several samples test specimens 100 x 100 mm in size.
2. Condition the specimens to constant weight in a standard atmosphere of 23 +/- 2 °C and 50 +/- 2 % relative humidity.

A. Determination of Thickness

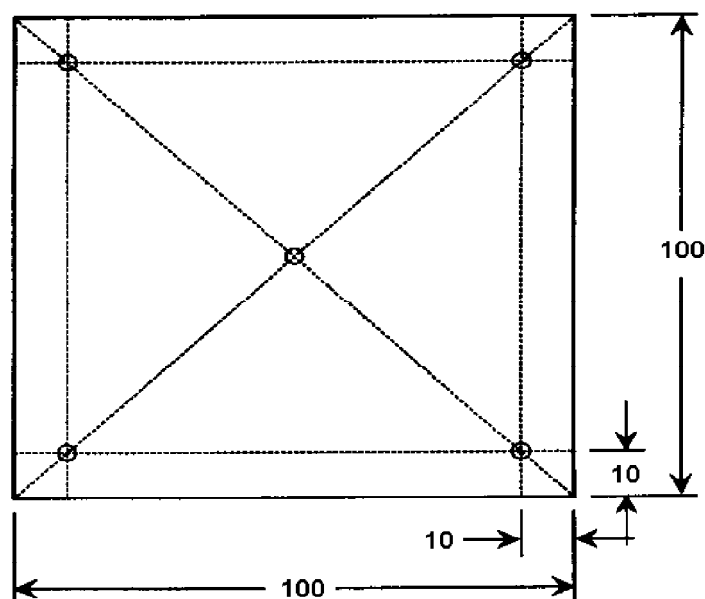
Measure the thickness at 5 points of the specimen (see drawing) and compute the average. Measure to an accuracy of 0.1 mm.

Date	Action	Revisions
2000 11 10	Revised	Editorial – no technical change A. Cockman
1994 02 28		

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B. Determination of Density

Determine the weight of the conditioned specimen and compute the density from the weight and the thickness as determined in A.

$$\text{Density (kg/m}^3\text{)} = \frac{W}{T \times 10000}$$

W = Weight of specimen in grammes.

T = Thickness of specimen in millimetres.

C. Determination of Weight of Covered Board per Unit Area

Determine the weight of the conditioned specimen and evaluate the weight per unit area in relation to the determined thickness. The weight per unit area is expressed in grammes/m² per 2 mm thickness and is computed as follows:

$$\text{Weight per unit area (m}^2\text{) (2 mm thick)} = \frac{W \times 100 \times 2}{T}$$

W = Weight of specimen in grammes.

T = Thickness of specimen in millimetres.

Chemicals, materials, parts, and equipment referenced in this document must be used and handled properly. Each party is responsible for determining proper use and handling in its facilities.