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Plywood — Determination of moisture content

Contreplaqué — Détermination de l'humidité

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 3806 was developed by Technical Committee ISO/TC 139, *Plywood*, and was circulated to the member bodies in June 1975.

It has been approved by the member bodies of the following countries :

Australia	Germany	Romania
Austria	Hungary	South Africa, Rep. of
Belgium	India	Sweden
Brazil	Israel	Turkey
Bulgaria	Italy	United Kingdom
Canada	Mexico	U.S.A.
Chile	New Zealand	U.S.S.R.
Czechoslovakia	Norway	Yugoslavia
Finland	Poland	
France	Portugal	

No member body expressed disapproval of the document.

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Plywood — Determination of moisture content

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method of determining the moisture content of plywood panels, defined in ISO 2074.

2 REFERENCES

ISO 1096, *Plywood — Classification.*

ISO 2074, *Plywood — Vocabulary.*

ISO ..., *Plywood — Sampling, cutting and inspection.*[1)]

3 PRINCIPLE

Determination, by weighing, of the loss of mass of a test piece between its state at the time of sampling and its state after drying to constant mass at 103 ± 2 °C and calculation of this loss of mass as a percentage of the mass of the test piece after drying.

4 APPARATUS

4.1 Balance allowing readings to an accuracy of 0,01 g.

4.2 Air convection drying oven, the temperature of which can be maintained at all points at 103 ± 2 °C.

4.3 Desiccator containing a desiccant to maintain air as close as possible to the absolutely dry condition (for example, phosphorus(V) oxide or calcium chloride).

5 SAMPLING AND TEST PIECES

5.1 Sampling and cutting

Sampling and cutting of test pieces shall be carried out in accordance with ISO ...

5.2 Test pieces

The test may be carried out on test pieces of any shape and dimensions with a minimum dry mass of 10 g, provided they are representative of the whole cross-section of the panel. The test piece shall be free from all loose splinters and sawdust.

NOTE — If smaller test pieces with a dry mass below 10 g have to be chosen, it must be ensured that the accuracy of the balance (4.1) is high enough to allow readings to an accuracy of at least 0,1 % of the mass of the dry test piece.

6 PROCEDURE

6.1 Weigh each test piece in the same state as at the time of sampling (see note) to an accuracy of 0,01 g.

NOTE — The first weighing should be carried out immediately after sampling. If this is impossible, all precautions should be taken to avoid variations of the moisture content during the time from sampling to weighing.

6.2 Dry each test piece at a temperature of 103 ± 2 °C to constant mass.[2)]

NOTE — Care shall be taken not to overcrowd the oven, and fresh test pieces shall not be added to the oven if it contains test pieces almost ready for final weighing.

6.3 After cooling in the desiccator (4.3), weigh each test piece with the same accuracy as before, rapidly enough to avoid an increase of moisture content greater than 0,1 %.

7 EXPRESSION OF RESULTS

7.1 Calculate the moisture content H of each test piece as a percentage by mass to the nearest 0,1 %, in accordance with the following formula :

$$H = \frac{m_H - m_0}{m_0} \times 100$$

where

m_H is the mass of the test piece at the time of sampling, in grams;

m_0 is the mass of the test piece after drying, in grams.

1) In preparation.

2) Constant mass is considered to be reached when the results of two successive weighing operations carried out at an interval of 6 h do not differ by more than 0,1 % of the mass of the test piece.