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CCS B 60



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 1933-2009

Replacing GB/T 1933-1991

**Method for determination of the density of wood
(English Translation)**

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Foreword

This revised standard adopts ISO 3131. 1975 "when the physical and mechanical tests - Determination of density." this standard and ISO 3131. 1975 The main technical differences compared as follows.

--- Increased drainage content measured by volume.

This standard replaces GB/T 1933-1991 "wood density determination." this standard compared with GB/T 1933-1991 Technical changes as follows.

--- Increased 4.3 content;

--- Delete all the contents of the original 5.1.3, Clause No. postponed;

--- Increasing the drainage volume measurement of test specimens are prepared in 7.1.2;

--- Added "Determination Act drainage sample volume" content; extended to the original terms of number 7.2.2 7.2.3, and the basic density measurement portion Content has been amended accordingly;

--- Added Appendix C "sample volume determination method of drainage," the test results are reported in Table;

--- Increasing the test results are explained, and Appendices A and B has been amended accordingly.

The Standard Appendix A, Appendix B, Appendix C are normative appendix.

This standard was proposed by the State Forestry Administration.

This standard by the National Standardization Technical Committee timber.

1 Scope

This standard specifies the determination of wood density test equipment, samples, test procedures and results of calculations.

This standard applies to wood unblemished small sample air-dry density, total dry measuring density and basic density.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 1928-2009 physical and mechanical test methods - General GB/T 1929-2009 physical and mechanical test materials and test specimens sawing method GB/T 1931-2009 Method for determination of moisture content of wood Principle 3 Measuring the mass, the volume of the sample, in order to the density of the wood.

4 Test Equipment

4.1

length measurement tool, measurements should be accurate to 0.001mm.

4.2

GB/T 1931-2009 Chapter 3 test equipment requirements.

4.3

using the drainage volume measurement, you need a beaker, stents, metal pins and balance.

Determination of air-dry density of 5

5.1 Sample

5.1.1

Test timber sawing and test specimens according to the provisions of GB/T 1929-2009 Chapter 3 performed.

5.1.2

Sample size is 20mm x 20mm x 20mm. Precision production and testing, adjust the moisture content of the sample specimen, respectively the provisions of GB/T 1928-2009

Chapter 3 and Chapter 4 were.

5.1.3

When a species in a sample of the ring when the average width of 4mm or more, the sample size should be increased to 50mm x 50mm x 50mm.

For the production of sample test block, the north-south direction of the continuous intercept sample from outside the pith, and left foot and shrinkage allowance.

5.2 Test procedure

5.2.1

in the opposite side of the center position of the specimen were measured tangential and radial direction parallel to grain size, accurate to 0.001mm. Can make Measurement of sample volume by water displacement method, the result is accurate to 0.001cm³. Said the mass of the sample to the nearest 0.001g.

5.2.2

The sample was placed in an oven starting temperature 60 °C maintained 4h, press GB/T 1931-2009 the provisions of 5.2 to 5.4 bake Dried and weighed.

5.2.3

Full sample dry mass was weighed out immediately after each of the opposite side in the center position of the specimen were measured tangential and radial direction parallel to grain size, Accurate to 0.001mm.

5.3 Calculation Results

5.3.1

The moisture content of the sample W when air-dry density shall formula (1) calculation, accurate to 0.001g/cm³.

$\rho W =$

$M_1 W$

$V_p W$