

ICS 79.020
CCS B 60



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

GB/T 1932-2009

Replacing GB/T 1932-1991

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

Issued on: February 23, 2009

Implemented on: August 1, 2009

Issued by: Standardization Administration of China

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Foreword

This revised standard adopts the International Standard ISO 4469. 1981 "Wood radial and tangential shrinkage determination" and ISO 4858. 1982 "Wood Timber volume shrinkage determination. " this standard and ISO 4469. 1981 and ISO 4858. 1982 The main technical differences compared as follows.

--- ISO is a radial and tangential measuring volume Shrinkage Shrinkage was measured separately as ISO 4469. 1981 and ISO 4858.

1982 two separate standards;

--- ISO 4858. 1982 in Chapter 5 of the quadrature method for measuring the volume of silver and drainage methods, and this standard specifies only quadrature method;

--- ISO 4469. 1981 and ISO 4858. direction parallel to the grain size of the sample of 1982 is set forth in 10mm ~ 30mm, and this standard the sample size specified in the direction parallel to the grain of 20mm.

This standard replaces GB/T 1932-1991 "method of measuring shrinkage of wood." this standard compared with GB/T 1932-1991 The main changes are as follows.

--- 5.1.1 delete "sample saturated with water wet wood production";

--- Increase "the number of samples 5.1.3, determined according to GB/T 1929-2009 specified in Chapter 5.";

--- Increased in 6.2 "when calculating the rate of volume shrinkage, longitudinal shrinkage rate of small wood grain direction may not be considered feet Inch variation in the test report should be described. ";

--- The "7 Test Report" to "7 test results recording and reporting", and is divided into two. "7.1 The test results recorded in accordance with Annex A fill. "" 7.2 The test report by content GB/T 1928-2009 7.4 guidelines for preparation. ";

--- Deleted Appendix A "sample volume", "air-dry moisture content" and "shrinkage rate" and other projects.

Appendix A of this standard is a 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 timber line shrinkage and volume shrinkage of test equipment, samples, test procedures and results of calculations.

This standard applies to the small sample timber from falling from the wet material was dried to air-dry and dry when the whole line of shrinkage and volume shrinkage Determination.

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 when the moisture content of wood below the fiber saturation point, its size and volume with decreasing moisture and shrink. Measuring wood with high moisture content State at the fiber saturation point, equilibrium moisture content at 12% wood environmental conditions to achieve a balanced condition, and the whole dry state Radial, tangential and longitudinal dimensions, calculate the shrinkage of wood line dry air is dry or full respectively according to the formula (including radial and tangential shrinkage rate) and Volume shrinkage rate, indicating shrinkage of the wood line and volume shrinkage of.

4 Test Equipment

4.1

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

4.2

GB/T 1931-2009 test equipment specified in Chapter 3.

5-wire shrinkage Determination

5.1 Sample

5.1.1

The test materials were sawing and test specimens according to GB/T 1929-2009 the provisions of Chapter 3.

5.1.2

Sample size is 20mm x 20mm x 20mm, sample preparation and testing requirements according to GB/T 1928-2009 Chapter 3 Provisions.

5.1.3

The number of samples, determined according to the provisions of GB/T 1929-2009 in Chapter 5.

5.2 Test procedure

5.2.1

determination of the moisture content of the sample should be higher than the fiber saturation point, otherwise the sample should be immersed in a temperature $(20 \pm 2) ^\circ\text{C}$ distilled water to Dimensionally stable after determination. To check whether the size of stable, two or three samples to be flooded once every three days and nights again measured tangential feet Inch, until two consecutive test results does not exceed the difference between the measured 0.02mm, the sample size can be considered stable. Then each of the opposite faces of each sample the central location of the sample were measured radial and tangential dimensions, accurate to 0.01mm, in the determination process of the sample should be kept wet wood status.

5.2.2

Each sample measured after placed under conditions GB/T 1928-2009 the provisions of Chapter 4 of the air-dry. In the air-dry process, with 2 ~ 3 test sample measured once every 6h chord dimension to twice the difference between the measurement results of the test does not exceed 0.02mm, you can think of to air-dry. Then press accuracy 5.2.1 respectively measure the radial and tangential dimension of each sample, and that the quality of the sample to the nearest 0.001g.