

CCS B 68



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

GB/T 1927.6-2021

**Test methods for physical and mechanical properties of small
clear wood specimens - Part 6: Determination of shrinkage**

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foreword

This document is in accordance with the provisions of GB/T 1:1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules of Standardization Documents"

drafted:

This document is part 6 of GB/T 1927 "Test Methods for Physical and Mechanical Properties of Small Specimens of Wood without Defects": GB/T 1927 has been issued

The following 15 parts are published:

- Part 1: Collection of test materials;
- Part 2: Sampling methods and general requirements;
- Part 3: Determination of growth ring width and latewood rate;
- Part 4: Determination of moisture content;
- Part 5: Density determination;
- Part 6: Determination of dry shrinkage;
- Part 7: Determination of water absorption;
- Part 8: Determination of swelling properties;
- Part 9: Determination of flexural strength;
- Part 10: Determination of flexural modulus of elasticity;
- Part 12: Determination of transverse grain compressive strength;
- Part 17: Determination of impact toughness;
- Part 18: Determination of impact indentation;

--- Part 19: Determination of hardness;

--- Part 20: Determination of splitting resistance:

This document replaces GB/T 1932-2009 "Determination of dry shrinkage of wood", compared with GB/T 1932-2009, except for structural adjustment and

In addition to editorial changes, the main technical content changes are as follows:

- a) the chapter "Terms and Definitions" was added (see Chapter 3);
- b) changed the principle (see Chapter 4; Chapter 3 of the:2009 edition);
- c) Changed the provisions on the size of the sample (see 6:1; 5:1 of the:2009 edition);
- d) Added "Sample growth wheel tilt limit" (see 6:3);
- e) Added "measurement site marking" (see 6:4);
- f) The basis for determining the air-dry state has been changed (see 7:1:2; 5:2:2 of the:2009 edition);
- g) Changed the basis for the determination of reaching the fully dry state (see 7:1:3; 5:2:3 of the:2009 edition);
- h) Changed the "result calculation formula" (see 8:2; 6:3 of the:2009 edition):

This document is modified to adopt ISO 13061-13:2016 "Test methods for the physical and mechanical properties of wood with small specimens without defects - Part 13: Wood

Radial and chordwise drying shrinkage determination" and ISO 13061-14:2016 "Wood physical and mechanical properties test methods for small samples without defects Part 14

Points: Determination of volume shrinkage of wood:

Compared with ISO 13061-13:2016 and ISO 13061-14:2016, this document has the following structural adjustments:

- a) Chapter 5 corresponds to Chapter 5 of ISO 13061-13 and 5:1 of ISO 13061-14;
- b) Chapter 6 corresponds to Chapter 6 of ISO 13061-13 and 5:2 of ISO 13061-14;
- c) 7:1 and 7:2 correspond to Chapters 7 and 8 of ISO 13061-13 respectively;
- d) 8:1 and 8:2 correspond to 5:3 and 5:4 of ISO 13061-14 respectively;
- e) Chapter 9 corresponds to Chapter 9 of ISO 13061-13 and Chapter 6 of ISO 13061-14:

The technical differences between this document and ISO 13061-13:2016 and ISO 13061-14:2016 and their reasons are as follows:

- a) Normative references adopt the corresponding national standards: Because of the normative properties listed in ISO 13061-13 and ISO 13061-14

The cited document has been adopted by the national standard:

b) Added the provisions for the radial chordwise shrinkage and volume shrinkage of the sample from the water-saturated state to the air-dry state: Because our standard

Historical versions have this test method, which has application value:

c) Drainage method in Chapter 6 of ISO 13061-14 has been deleted: Because the specific measurement method is not specified in the ISO standard:

The following editorial changes have been made to this document:

--- In order to harmonize with the existing standards, the name of the standard is changed to "Test methods for physical and mechanical properties of wood with small samples without defects - Part 6: Dry

Shrinkage Determination";

Please note that some content of this document may be patented: The issuing agency of this document assumes no responsibility for identifying patents:

Introduction

The standard of test methods for physical and mechanical properties of wood is used in wood scientific research, teaching, wood inspection, wood structure design, wood processing and production, etc:

It is widely used and is an important basic standard in the wood industry: In 1980, my country issued the first edition of the test methods for physical and mechanical properties of wood:

The domestic standard (GB/T 1927~GB/T 1943) was revised twice in:1991 and:2009 respectively: In recent years, with the development of wood science and technology

The development of technology, ISO 3129:2012 "Sampling method for physical and mechanical testing of wood with small samples of wood without defects"

Methods and general requirements" was revised, ISO 3130:1975 "Determination of moisture content by physical and mechanical tests of wood", ISO 3131:1975

15 international standards for test methods such as "Determination of Density in Physical and Mechanical Tests of Wood" have been integrated and revised: Based on this, in order to connect with international standards

This time, the third revision of the national standard for test methods for physical and mechanical properties of wood in my country will be carried out, and the 22 scattered test methods will be integrated and adjusted:

The whole is a sub-part document of GB/T 1927, and the latest version of the international

standard has been adopted in the revision:

GB/T 1927 aims to establish a test method for the physical and mechanical properties of small sample wood without flaws, and is intended to be composed of 21 parts:

--- Part 1: Collection of test materials: The purpose is to describe the sample collection method for testing the physical and mechanical properties of wood with small samples without defects:

--- Part 2: Sampling methods and general requirements: The purpose is to establish a suitable test for the physical and mechanical properties of small wood samples without defects:

Specimen sawing, interception methods and general requirements to be observed when testing methods:

--- Part 3: Determination of growth ring width and latewood rate: The purpose is to characterize the growth ring width and latewood rate of small samples of clear wood method of determination:

--- Part 4: Determination of moisture content: The purpose is to describe a method for the determination of the moisture content of small wood samples without defects:

--- Part 5: Density determination: The purpose is to describe the density, air-dry density, absolute dry

Methods for the determination of density and basic density:

--- Part 6: Determination of dry shrinkage: The purpose is to describe the measurement of radial, chordwise and volume drying shrinkage of unblemished small sample wood:

determined method:

--- Part 7: Determination of water absorption: The purpose is to describe the determination method of 6h, 24h and the maximum water absorption rate of small sample wood without defect:

--- Part 8: Determination of swelling: The purpose is to describe the measurement of radial, chordwise and volumetric swell of unblemished small wood samples:

determined method:

--- Part 9: Determination of flexural strength: The purpose is to describe a method for the determination of the flexural strength of small wood samples without defects:

--- Part 10: Determination of flexural modulus of elasticity: The purpose is to describe a method for the determination of the flexural modulus of elasticity of small wood samples without defects: