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

**GB/T 4893.6-2013**

Replacing GB/T 4893.6-1985

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**Test of surface coatings of furniture -- Part 6: Determination of  
gloss value**

家具表面漆膜理化性能试验 第6部分：光泽测定法

**(English Translation)**

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### Foreword

GB/T 4893 "Test physical and chemical properties of surface coatings of furniture" is divided into nine sections.

- Part 1. Determination of resistance to cold liquids;
- Part 2. Determination of resistance to heat;
- Part 3. Determination of dry heat resistance;
- Part 4. cross-cut adhesion assay;
- Part 5. Determination of thickness;
- Part 6. Determination of luster;
- Part 7. Determination of resistance to heat and cold;
- Part 8. Determination of abrasion resistance;
- Part 9. Determination of impact.

This section GB/T 4893 Part 6.

This section drafted in accordance with GB/T 1.1-2009 given rules.

This Part replaces GB/T 4893.6-1985 "furniture surface film gloss determination", compared with the GB/T 4893.6-1985, the main Technical changes are as follows.

- Increasing the range (see Chapter 1);
- Increased terms and definitions (see Chapter 2);
- Increased by principle, it illustrates the principle test methods (see Chapter 3);
- Increased instrument for angle of incidence angle gloss meter, light source like a hole, the size of the relevant accuracy and gloss meter schematics and so do say Ming (see Chapter 4);
- Delete the original standard photoelectric gloss instrument, lens cleaning cloth or paper

content (see the 1985 edition of the Chapter 1);

- Increasing the reference standard board (see Chapter 5);
- Modify the sample requirements, sample before coating after the completion of the storage time of the sample and test requirements have been modified (see Chapter 6);
- Modify the test conditions and test procedure (see Chapter 7);
- Increased step instrument calibration (see Section 7.2);
- Increase the test results, provides for the detected data offs conditions (see Chapter 8);
- Remove the test report (see the 1985 edition of Chapter 5);
- Deleted Appendix A (see 1985 edition of Appendix A).

This section uses redrafted law revision using ISO 2813:1999 "Paints and varnishes contain metallic paint films of 20 °, 60 ° and 85 ° specular gloss measurement ", and ISO 2813:1999 as compared to the main technical differences and the following reasons.

--- Modify the scope to which this standard specifies the use of a reflectometer to geometry 20 °, 60 ° or 85 ° measurement of paint film Test methods for specular gloss modify the present section applies to the determination of wooden furniture in the surface gloss of the film (see Chapter 1, ISO 2813. Chapter 1, 1999);

--- Remove the liquid paint film gloss measurement instruments, sampling, preparation of model, measurement precision, etc., for the determination of the home the wooden surface with paint gloss (see ISO 2813:1999 of 5.1, 5.2, Chapter 6, Section 8);

--- Added auto-zero function of the gloss meter, zero calibration step is omitted for the determination of wooden furniture in the surface of the film Gloss (see 7.2.1, ISO 2813:1999 7.2.1);

--- Adds only the second work-plate calibration reference standard shall be applicable to the determination of wooden furniture in the surface gloss of the film (See 7.2.2, ISO 2813:1999 7.2.2).

Please note that some of the content of this document may involve patents. Release mechanism of the present document does not assume responsibility for the identification of these patents.

This part is proposed by the China Light Industry Federation.

This part of the furniture by the National Standardization Technical Committee (SAC/TC480) centralized.

This part mainly drafted by. Institute of Technology and Business University, Zhejiang Industrial Design, Furniture and Hardware Institute of Zhejiang Province, the Shanghai Quality Supervision Technical Inspection Institute, Jiangsu Province Product Quality

Supervision and Inspection Institute, Zhongshan City freshman Paint Co., Ltd., Guangdong Federal Furniture Holdings Limited the company, Bauhinia Paints (Shanghai) Co., Ltd.

## 1 Scope

GB/T 4893 provisions of this part of the test method for wood furniture surface paint gloss.

This section applies to the determination of wooden furniture in the film surface gloss.

This section does not apply to the determination of metal-containing pigment paint film gloss.

## 2 Terms and definitions

The following terms and definitions apply to this document.

Specular gloss for a predetermined angle of the light source and the receiver, the direction of specular reflection from the object luminous flux and the refractive index of glass mirror to reverse the direction of 1.567 the ratio of the luminous flux emitted. In order to determine the scale of the specular gloss, giving a refractive index of 1.567 standard polished black glass plate in 20 °, 60 °, 85 ° Gloss angle of incidence is 100, in units of GlossUnit (GU).

### Principle 3

Light source emits light through a lens L1 reaches the test surface after the light is reflected to lens L2, converged diaphragm located at the photocell photoelectrically Converting the electrical signal supplied to the processor after the conversion, the processed signals through the instrument displays the results. For the measurement of the same series, it should be guaranteed who unified the incident angle, even if it is not within the scope of the proposed geometry.

**Note 1:** 60 ° incident angle for all of the film, but for high gloss or matte film closest, 20 ° and 85 ° is more suitable.

**Note 2:** 20 ° angle of incidence of the high-gloss paint (ie, 60 ° specular gloss above 70GlossUnit the film) can give better resolution.

**Note 3:** 85 ° angle of incidence in that low-gloss paint (ie, 60 ° specular gloss of the film is less than 10GlossUnit) gives better resolution.

### 7.4.1 Glossmeter

Glossmeter should be light, the lens and the receiver body composition.

4.2 angle of incidence the axis of the incident beam normal to the surface to be tested to 20 °  $\pm$  0.1 °, 60 °  $\pm$  0.1 °, 85 °  $\pm$  0.1 °. The axis of the receiver and the incident light should be Axis coincides with the line of the mirror, the deviation within  $\pm$  0.1 °. But with a piece of flat glass or polished black mirror on the front panel when the test position, the source image to

be formed at the center of the field diaphragm of the receiver (see Figure 1). In order to ensure the entire surface of the average, the test plate light district the width of the field should be significantly larger than the possible surface structure, typically of a width of 10mm. Like light source, the receiver hole should be as shown in Table 1.

Receiver field diaphragm angle lens the size of the receiver should be measured.