



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

**GB/T 2679.1-2020**

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**Paper--Determination of transmittance--Diffuse reflectance  
measurement**

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### Foreword

GB/T 2679 is currently divided into the following parts:

- GB/T 2679.1 Paper - Determination of transmittance - Diffuse reflectance measurement;
- GB/T 2679.2 Sheet materials - Determination of water vapour transmission rate - Gravimetric (Dish) method;
- GB/T 2679.6 Corrugating medium - Determination of the flat crush resistance after laboratory fluting;
- GB/T 2679.7 Board - Determination of puncture resistance;
- GB/T 2679.8 Paper and board - Determination of compressive strength (Ring crush method);
- GB/T 2679.10 Paper and board - Compressive strength - Short span test;
- GB/T 2679.11 Paper and board - Qualitative analysis of mineral filler and mineral coating - SEM/EDAX Method;
- GB/T 2679.12 Paper and board - Qualitative analysis of mineral filler and mineral coating - Chemical method;

- GB/T 2679.14 Filter paper and filterboard - Determination of maximum pore diameter;
- GB/T 2679.17 Corrugated fibreboard - Determination of edgewise crush resistance (Edge reinforced method).

This Part is Part 1 of GB/T 2679.

This Part is drafted in accordance with the rules given in GB/T 1.1-2009.

This Part replaces GB/T 2679.1-2013 "Paper - Determination of transmittance - Diffuse reflectance measurement". Compared with GB/T 2679.1-2013, the main technical changes are as follows:

- Add the term "White backing luminance factor" (see 3.4);
- Delete "Transmittance" (see 3.4 of the 2013 edition);
- Change the definition of "Transmittance from reflectance factor measurements" (see 3.5; 3.5 of the 2013 edition);
- Modify the "Filter-function" in the "Apparatus" (see 5.2; 5.2 of the 2013 edition);
- Modify the measurement accuracy of luminance factor in the test procedure (see 8.2, 8.3 and 8.4; 8.2, 8.3 and 8.4 of the 2013 edition);
- Modify the labeling of  $R_y$  and  $R_0$  in the calculation (see Clause 9; Clause 9 of the

### **2013 edition);**

- Add the structural changes of this Part compared with ISO 22891:2013 (see Annex A).

This Part uses the redraft law to modify and adopt ISO 22891:2013 "Paper - Determination of transmittance by diffuse reflectance measurement".

Compared with ISO 22891:2013, this Part has more adjustments in structure. Annex A lists the comparison of clause-subclause numbers between this Part and ISO 22891:2013.

The technical differences between this Part and ISO 22891:2013 and their reasons are as follows:

- As for the normative references, this Part has made adjustments with technical

differences, to adapt to the technical conditions of China. The adjustments are mainly reflected in Clause 2 "Normative references". The specific adjustments are as follows:

- ? Replace ISO 186 with GB/T 450, which modifies and adopts the international standard;
- ? Replace ISO 2469 with GB/T 7973, which is not equivalent to the international standard;
- ? Delete reference to ASTM E308-06.
- Change the definition of the term "Luminance factor". Use "CIE standard illuminant D65 and CIE 1964 supplementary standard chromaticity system" to replace "CIE standard illuminant C and CIE 1931 standard chromaticity system in ISO 22891:2013", to be consistent with the instruments and related standards for measuring paper color in China's paper industry (see 3.2 and 5.2).
- Delete the terms "Intrinsic luminance factor", "Transmittance", "Regular transmittance", "Diffuse reflectance transmittance", "Transparent medium", and "Translucent medium", to meet the technical conditions of China.
- Replace the luminance factor (C), the single-sheet luminance factor (C) and the white backing luminance factor (C) in the standard WITH the luminance factor (D65), the single-sheet luminance factor (D65) and the white backing luminance factor (D65) respectively; to be consistent with the technical conditions of test instruments in China (see 3.2, 3.3, 3.4, 3.5, 8.2, 8.3, 8.4).
- Modify the provisions of filter reflectometer and abridged spectrophotometer, to be consistent with the technical conditions of test instruments in China (see 5.2 and Annex B).
- Add the requirement that "The  $R_y$  value of the backing is  $(84.0 \pm 1.0)\%$ ", to eliminate the result deviation caused by the white backing (see 5.6).
- Modify the calculation formula in the calculation, to be consistent with the technical conditions of test instruments in China (see Clause 9).

- Modify Annex A "Spectral characteristics of reflectometer for determining diffuse reflectance factor" of ISO 22891:2013 (see Annex B).

- Delete Annex B, Annex C, and Bibliography of ISO 22891:2013. The content of these parts is not suitable for China's national conditions.

This Part makes the following editorial change:

- Change the standard name.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. The issuing authority of this document shall not be held responsible for identifying any or all such patent rights.

This Part was proposed by China National Light Industry Council.

This Part shall be under the jurisdiction of National Technical Committee 141 on Paper Industry of Standardization Administration of China (SAC/TC 141).

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The previous editions of the standard replaced by this Part were released as follows:

- GB 2679.1-1981, GB/T 2679.1-1993, GB/T 2679.1-2013.

Paper - Determination of transmittance - Diffuse reflectance measurement

## 1 Scope

This Part of GB/T 2679 specifies the method for determination of transmittance by diffuse reflectance measurement.

This Part applies to white and near-white translucent paper. To measure paper containing fluorescent whitening agents, use a UV cut-off filter to eliminate