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

GB/T 8941.1-1988

Replacing GB/T 8941-2007

**Paper and board -- Measurement of specular gloss
(English Translation)**

Issued on: January 1, 1970

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Foreword

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

This standard replaces GB/T 8941-2007 "Paper and cardboard specular gloss (20 °, 45 °, 75 °)". This standard GB/T 8941-2007 compared to the main technical differences are as follows.

- Modify the gloss reference, using a refractive index of 1.567 gloss black glass as a benchmark, in line with our values \u200b\u200bgloss Biography Delivery System.
- Remove the Fresnel (Fresnel) formula.
- Modify the test procedure for the determination of four directions, a total of 20 measured values, consistent with the ISO standard sample measured by the two directions each.
- Appendix B adds geometry diagram and define field aperture angle of the light source in FIG.
- Deleted precision.

This standard uses redrafted Law Amendment uses ISO 8254-1:2009 "Paper and board Determination of specular gloss - Part 1. 75 ° Gloss converging beam, TAPPI Method "and ISO 8254-3:2004" Paper and board Determination of specular gloss - Part 3. 20 ° converging Beam gloss, TAPPI Method. " this standard and ISO 8254-1:2009 and ISO 8254-3:2004, compared with more adjustment in the structure, listed in Appendix A of this standard Reg number Control List 2004. with ISO 8254-1:2009 and ISO 8254-3.

This standard and ISO 8254-1. and ISO 8254-3 2009. The main technical differences compared to 2004 are as follows.

- On normative references, this standard has been adjusted technical differences, in order to adapt our technical conditions, the adjusted situation Focus is reflected in the status of Chapter 2, "Normative references", the specific adjustments are as follows.

With a modified adoption of international standards GB/T 450 instead of ISO 186;

With equivalent to international standards of GB/T 10739 instead of ISO 187.

The standard 20 ° angle measurement method ISO 8254-3:2004 main technical differences are as follows.

--- Modify the gloss reference to a refractive index of 1.567 gloss black glass as a reference, it is assumed that the plane be the ideal cast the state of the light from the plane mirror natural beam reflected at this time is defined gloss value of 100 gloss units.

--- Remove the ISO standard preface, foreword.

--- Increased the specular angle, the terms and definitions specular gloss values.

--- Remove the Fresnel (Fresnel) formula.

--- Amend Appendix B spectrum conditions with ISO 8254-1. a consistent 2009 (E) spectral conditions.

--- Deleted precision.

The standard 75 ° angle measurement method ISO 8254-1:2009 main technical differences are as follows.

--- Modify the gloss reference to a refractive index of 1.567 gloss black glass as a reference, it is assumed that the plane be the ideal cast the state of the light from the plane mirror natural beam reflected at this time is defined gloss value of 100 gloss units.

--- Remove the ISO 8254-1:2009 (E) 3.6 and 3.7 reflection characteristic curve was measured by the value of the two terms, the merger of ISO 8254-1:2009 (E) 3.8 and 3.9 in two terms.

--- Remove the Fresnel (Fresnel) formula.

--- Deleted precision.

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.

The standard proposed by China National Light Industry Council.

The standard paper by the National Standardization Technical Committee (SAC/TC141) centralized.

1 Scope

This standard specifies the method with 20 °, 45 °, 75 ° gloss paper and paperboard measured specular gloss.

This standard applies to cast coated paper, glossy paper, aluminum foil, vacuum aluminum,

coated paper and cardboard. 20 ° gloss measurement method is mainly applied to cast coated paper, glossy paper and high gloss paper and cardboard, but also for paper and paperboard proofs high print gloss. Not available in gloss compared Low of coated or uncoated paper and paperboard. 45 ° gloss measurement methods for the determination of aluminum foil, vacuum aluminum and other metal and composite paper cardboard. 75 ° gloss measurement method is mainly used for coating paper and paperboard, uncoated paper and paperboard can also be used or low-gloss paper and printing paper Plate proofs. Color samples and the difference between diffuse reflectance little effect on the determination of gloss.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 450 paper and cardboard to take samples and specimens to the vertical and horizontal, positive and negative determination (GB/T 450-2008, ISO 186:2002, MOD)
GB/T 10739 paper, paperboard and pulp sample processing and testing standard atmospheric conditions (GB/T 10739-2002, ISO 187.

1990, EQV)

3 Terms and Definitions

The following terms and definitions apply to this document.

Gloss gloss

Directional selection surface reflection properties, which determines the surface of the object presented can see the strong reflected light microscopy or object Degree image.

Retro-reflective regularreflection Follow the laws of geometrical optics, not diffuse reflection.

Diffuse diffusereflection on a macro scale, there is no reflection of directional reflection.

Specular reflection angle specularangle and incident on the same plane, the angle equal and opposite directions, and the angle between the normal to the plane.

Specular gloss in certain reflection angle measured or observed gloss.