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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 15763.2-2025

Replacing GB 15763.2-2005

Safety glazing materials in building - Part 2: Tempered glass

建筑用安全玻璃 第2部分：钢化玻璃

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1 Scope

GB/T 15763.2-2025 is the Chinese national standard on safety glazing materials in building - part 2: tempered glass, in the field of glass and ceramics industries. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 31 October 2025 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 August 2026. Classification: ICS 81.040.20, CCS Q33. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document specifies the classification and requirements for tempered glass in building; it describes the test methods and stipulates the inspection rules, packaging, transportation and storage. This document is applicable to the design, production, and delivery of tempered glass in building that has been manufactured using heat treatment processes. For tempered glass intended for applications other than buildings (e.g., industrial equipment, furniture, and home appliances) for which no specific product standards exist, this document may be used as a reference, taking into account the specific characteristics of

the product in question.

2 Normative References

The contents of the following documents constitute indispensable clauses of this document through normative references in the text. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references without a specified date, the latest version (including all the modifications) is applicable to this document.

GB/T 6091 Knife straight edge GB 11614 Flat glass

GB/T 18144 Test method for measurement of stress in glass

GB/T 20428 Granite surface plates JC/T 2451 Borosilicate flat glass

3 Terms and Definitions

The following terms and definitions are applicable to this document.

3.1 Tempered Glass; Toughened Glass Glass in which a compressive stress layer has been induced on the surface through a heat treatment process, resulting in significantly enhanced mechanical strength and thermal shock resistance, and which, upon breakage, exhibits a distinctive fragmentation pattern. NOTE. During the actual use of tempered glass in engineering projects, tempered glass may undergo shattering or bursting under non-impact conditions due to certain specific causes. See Appendix A for the causes and corresponding measures that can be taken.

3.2 Iridescence; Strain Pattern Optical interference patterns-manifesting as variations in color or brightness across different areas of the glass plate surface-that are observable within a specific angular range when tempered glass is viewed under polarized light. NOTE. Strain patterns are an inherent characteristic of tempered glass; the causes of their formation are detailed in Appendix B.

3.3 Crack Cracking defects present on the glass plate surface or cross-section.

3.4 Corner Fault The phenomenon of damage or incompleteness at the corners of the glass.

3.5 Mottling Visible, spot-like defects generated on the glass surface during the tempering process that cause light scattering.

3.6 Cloudiness; White Mark Dense, mist-like defects appearing as white streaks or bands on the glass surface, resulting from abrasion during the tempering process.

4 Classification

Tempered glass is classified by shape into flat tempered glass and curved tempered glass.

5.1 Dimensions and Tolerances

5.1.1 The tolerances for the side lengths of rectangular flat tempered glass shall comply with the provisions of Table 1. Table 1 -- Tolerances for Side Lengths of Rectangular Flat Tempered Glass and Straight Edge Lengths of Curved Tempered Glass peeling on the surface and edges of the sample after the test is not considered damage.

6.1 Dimensions and Tolerances

6.1.1 Side length, arc length and straight edge length Use a steel ruler or steel tape measure with a graduation value of 1 mm to measure the lengths of each side of the rectangular flat tempered glass, or the arc edges and straight edges of the curved tempered glass. The difference between the actual measured value and the nominal value is the tolerance.

6.1.2 Diagonal difference Use a steel ruler or steel tape measure with a graduation value of 1 mm to measure the length of the two diagonals of the rectangular flat tempered glass and calculate the absolute value of the difference.

6.1.3 Conformity Use a feeler gauge or a steel ruler with a graduation value of

0.5 mm to measure the gap between the glass and the standard sample or mold along the edge of the curved tempered glass and perpendicular to the dry glass surface. The conformity of the curved tempered glass is the maximum gap measurement.

6.1.4 Thickness tolerance Measure with an outside micrometer with a graduation value of

0.01 mm or an instrument of equivalent precision. For rectangular products, the measurement is at the midpoint of the four sides within 15 mm from the edge of the glass plate; for products of other shapes, the measurement points are agreed upon by both the supply and demand sides. Take the arithmetic mean of the measured values, and the difference between the mean and the nominal thickness is the thickness tolerance. Values are rounded to 2 decimal places.

6.2 Edge Processing Visually inspect the shape and quality of tempered glass edge processing.

6.3 Circular Holes Use a vernier caliper with a graduation value of

0.02 mm or an instrument of equivalent precision to measure the hole diameter. Measure once in each perpendicular direction. Calculate the difference between the two measured values and the nominal value of the hole diameter. The tolerance with the largest absolute value of the difference is the tolerance for hole diameters. Use a steel ruler or steel tape measure with a graduation value of 1 mm to measure the position of the circular hole, the

shortest distance from the edge of the inner diameter of the circular hole 2 -- Support plate; 3 -- Sample; 4 -- Flat support table. Figure 15 -- Schematic Diagram of the Fragmentation Pattern Test of Curved Tempered Glass

6.10 Impact Performance of Shot Bag

6.10.1 Samples The sample is a flat test piece with dimensions of 1 930 mm 864 mm that is of the same thickness, same type and manufactured under the same process conditions as the product.

6.10.2 Test equipment The test device shall comply with the provisions of Appendix F.

6.10.3 Test steps

6.10.3.1 Use a flexible steel wire rope to lift the impactor vertically and let it hang down naturally, so that the outer circumference of the largest diameter part of the impactor's cross- section is no more than 13 mm from the surface of the sample and within 50 mm from the center of the sample.

6.10.3.2 Lift the impactor so that the center position of the maximum diameter of the impactor remains at a drop height of 300 mm. Release the impactor with an initial velocity of zero, swing freely and fall, impacting once near the center point of the sample. If the sample is not damaged, raise it to 750 mm and impact again near the center point of the same sample.

6.10.3.3 When the sample is still intact, raise it to a height of 1 200 mm and impact once near the center point of the same sample. Before each impact test, the impactor shall be raised to the corresponding height and kept stationary. At this impact height, the central axis of the metal rod of the impactor shall be in a straight line with the suspension rope of the impactor, and the steel wire rope shall be in a taut state.

6.10.3.4 When the drop height is 300 mm, 750 mm or 1 200 mm, when the sample is damaged, within 5 min after the destruction, select the 10 largest glass fragments without penetrating cracks, weigh their mass, and measure the length of the longest glass fragment without penetrating cracks remaining on the frame. The length of the part pressed inside the frame is not counted.