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

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**Safety technical requirements for safety glazing materials in
building**

建筑用安全玻璃安全技术要求

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1 Scope

GB 46030-2025 is the Chinese national standard on safety technical requirements for safety glazing materials in building, in the field of glass and ceramics industries. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 1 August 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 Q 33. 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 general provisions, requirements, test methods, and conformity criteria for safety glazing materials in building. This document applies to tempered glass, laminated glass, heat-soaked tempered glass, safety insulating glass, and fire-resistant glass for use in buildings.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 11944, Insulating glass unit

GB/T 15763.1, Safety glazing materials in building -- Part

3 Terms and definitions

For the purposes of this document, the terms and definitions defined in GB/T 11944, GB/T 15763.1, GB/T 15763.2, GB/T 15763.3, and GB/T 15763.4 as well as the followings apply.

3.1 fire resistant glass Glass that meets the requirements for integrity of fire resistance (3.2) and/or thermal insulation of fire resistance (3.3) under specified fire resistance test conditions.

3.2 integrity of fire resistance Under specified fire-resistance test conditions, the ability of a glass component - when exposed to fire on one side - to prevent the penetration of smoke and flames or the appearance of flames on the unexposed side for a certain period of time.

3.3 thermal insulation of fire resistance Under specified fire-resistance test conditions, the ability of a glass component - when exposed to fire on one side - to prevent the temperature of its unexposed side from exceeding a specified limit for a certain period of time.

3.4 heat flux The amount of heat per unit area received on the receiving surface of the measuring instrument. [Source: GB/T 26784-2011, 3.1]

3.5 tempered glass; toughened glass Glass that has undergone a heat treatment process to form a compressive stress layer on its surface, resulting in enhanced mechanical strength and thermal shock resistance, and which exhibits a distinctive breakage pattern upon fracturing.

3.6 laminated glass A composite material consisting of glass bonded together with other materials - such as glass and/or plastic - using interlayers to form a single, integrated unit. NOTE. The most common and widely used type consists of glass components bonded together into a single unit, separated by an interlayer and processed to ensure adhesion.

3.7 heat soaked thermally tempered glass; HST Soda-lime-silica tempered glass processed under specific conditions.

3.8 safety insulating glass unit Insulating glass unit with tempered glass, heat-soak tested tempered glass, and/or laminated glass on the two outer sides.

4 General rules

4.1 Safety glazing materials in building includes tempered glass, laminated glass, heat soaked thermally tempered glass, safety insulating glass unit, and fire-resistant glass.

4.2 The safety performance of tempered glass, laminated glass, heat soaked thermally tempered glass, and safety insulating glass unit refers to their strength and breakage safety - specifically, high flexural and structural strength, resistance to easy breakage or cracking, and - in the event of breakage or cracking - a form that minimizes the risk of personal injury.

4.3 Fire-resistant glass can be of the monolithic, multi-layer composite, or insulating glass

unit type.

4.4 The safety performance of fire-resistant glass refers to its fire safety - specifically, its ability to maintain integrity or thermal insulation for a specified duration when exposed to fire.

4.5 This document specifies the safety performance requirements for tempered glass, laminated glass, heat soaked thermally tempered glass, safety insulating glass unit, and fire-resistant glass during application. Given that these types of glass may be used individually or in combination as required, the corresponding requirements must all be met when the design scheme or application scenario simultaneously specifies criteria for the strength, breakage safety, and fire resistance of the final product (see Table 1). Table 1 -- Requirements for tempered glass, laminated glass, heat soaked thermally tempered glass, safety insulating glass unit, and fire-resistant glass

5.1 Tempered glass and heat soaked thermally tempered glass

5.1.1 General requirements Tempered glass and heat soaked thermally tempered glass shall comply with the provisions of 5.1.2, 5.1.3, and 5.1.4. Where fire resistance requirements apply, they shall also comply with the provisions of 5.4.

5.1.2 Fragment state The fragmentation state of the samples after the test shall comply with the requirements of Table 2. Table 2 -- Fragment state requirements

5.1.3 Shot bag impact performance After the test, the sample shall comply with any of the following provisions.

- a) The sample does not fail when the drop height of the shot bag is 1200 mm;
- b) When the sample breaks, the sum of the masses of the ten heaviest fragments shall not exceed the mass equivalent to a surface area of 65 cm² of the sample. The length of any glass fragment remaining within the frame that does not exhibit a through-crack shall not exceed 120 mm.

5.1.4 Flexural strength After testing, the lower limits of the bending strength for different types of tempered glass/heat-soaked tempered glass shall comply with the following provisions, respectively.

- a) For tempered glass or heat soaked thermally tempered glass made from flat glass or coated glass, the lower limit of flexural strength shall be no less than 120 MPa;
- b) For tempered glass or heat soaked thermally tempered glass made from patterned glass, frosted glass, engraved glass, sandblasted glass, or acid-etched glass, the lower limit of flexural strength shall be no less than 90 MPa;
- c) For tempered glass or heat soaked thermally tempered glass with an enameled glass substrate (with the glass surface under compression), the lower limit of flexural strength

shall be no less than 75 MPa.

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