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**BUILDING MATERIALS INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

JC/T 977-2005

**Chemically strengthened glass
(English Translation)**

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Foreword

This Standard was modified on the basis of European standard EN 12337-

1.2000 Glass in Building - Chemically Strengthened Soda Lime Silicate Glass

- Part 1. Definition and Description.

Compared with EN 12337-1.2000, the main technical differences are as follows.

- Deleted measurement method for squareness of planar rectangular products; added requirements for diagonal difference;
- Added requirements and measurement methods for surface stress and compressive stress layer depth by referring to ASTM C1422-99 Standard Specification for Chemically Strengthened Flat Glass.

Appendix A of this Standard is normative. Appendix B is informative.

This Standard was proposed by China Building Materials Industry Association.

This Standard shall be under the jurisdiction of National Technical Committee on Building Glass of Standardization Administration of China.

Main drafting organization of this Standard. Glass Science Institute of China

Building Materials Academy.

Drafting organizations of this Standard. China Southern Glass Technology Holdings (Group) Co., Ltd., Beijing Gelin Jingfeng Fireproof Glass Co., Ltd..

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This Standard was issued for the first time.

Chemically strengthened glass

1 Scope

This Standard specifies the term and definition, classification and marks, technical requirements, test methods, inspection rules, package, marks, transport and storage of chemically strengthened glass.

This Standard is applicable to flat chemically strengthened glass.

2 Normative references

The following standards contain the provisions which, through reference in this Standard, constitute the provisions of this Standard. For dated references, subsequent amendments (excluding corrections) or revisions do not apply to this Standard. However, the parties who enter into agreement based on this Standard are encouraged to investigate whether the latest versions of these documents are applicable. For undated reference documents, the latest versions apply to this Standard.

GB/T 1216 Micrometers

GB/T 5137.1-2002 Test Methods of Safety Glazing Materials Used on Road Vehicle

GB 11614-1999 Float glass

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

JB/T 8788 Feeler gauges

3 Terms and definitions

The following terms and definitions apply to this document.

Chemically strengthened glass

Glass of which alkali metal ions of glass surface are replaced by other alkali metal ions in molten salt, so as to improve mechanical strength.

Stain trace,

smog

There shall be no obvious stain trace, smog on the surface of chemically tempered glass.

5.6.1 Edge machining quality of chemically tempered glass

The edge of chemically tempered glass used in construction shall be chamfered and fine grinded. The edge quality of chemically tempered glass used for non-construction shall be determined by the seller and the buyer.

5.6.2 Hole edge machining quality

Hole edge machining quality shall be determined by the seller and the buyer.

5.6.2.1 The tolerance of hole aperture of chemically tempered glass products

used for construction shall comply with provisions of Table 6. This provision only applies to the glass of which nominal thickness is not less than 4 mm. The tolerance of hole aperture of chemically tempered glass used for non-construction shall be determined by the seller and the buyer.

Table 6 Hole aperture and its tolerance unit. mm

Nominal hole aperture (D) Tolerance

$D < 4$ Determined by the seller and the buyer

$4 \leq D \leq 20 \pm 1.0$

$20 < D \leq 100 \pm 2.0$

$D > 100$ Determined by the seller and the buyer

5.6.2.2 The distance a BETWEEN hole edge of chemically tempered glass

products used for construction AND glass edge shall not be less than twice glass nominal thickness d , as shown in Figure 1. The distance b between two hole edges shall not be less than twice glass nominal thickness d , as shown in Figure 2. The distance c BETWEEN hole edge AND glass corner shall not be less than 6 times glass nominal thickness d , as shown in Figure 3. The hole center position shall expressed by referring to Figure 4. build coordinate system as Figure 4 and use hole center position's coordinates (x, y) to show hole center position. Since the tolerance of hole center position x, y is same with tolerance of glass side length (see Table 3), this provision is only applicable to glass products of which nominal thickness is not less than 4 mm and the holes of whole glass plate do not exceed 4. Hole position requirements for chemically tempered glass products used for non-construction shall be determined by the seller and the buyer.

Category B $25 < d \leq 50$

Category C $d > 50$

5.12 Impact resistance

Impact resistance of chemically tempered glass shall comply with provisions of Table 10.

Table 10 Impact resistance of chemically tempered glass

Glass thickness d

mm

Impact height

m State after impact

$d < 2$ 1.0 The specimen must not be destroyed. $d \geq 2$ 2.0