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# NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

ICS 81.040.30

Q 34

GB/T 36259-2018

# High aluminum silicate cover glass for touch panel

触摸屏盖板用高铝硅玻璃

Issued on: June 7, 2018 Implemented on: May 1, 2019

Issued by: General Administration of Quality Supervision, Inspection and Quarantine;

Standardization Administration Committee.

# **Table of Contents**

Foreword	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	4
4 Classification	5
5 Requirements	5
6 Test methods	8
7 Inspection rules	12
8 Packaging, marks, transport, storage	14

# High aluminum silicate cover glass for touch panel

# 1 Scope

This Standard specifies classification, requirements, test methods, inspection rules, packaging, marks, transport and storage of high aluminum silicate cover glass for touch panel.

This Standard is applicable to colorless and transparent high aluminum silicate cover glass for touch panel of which alumina content is greater than 12%.

## 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 1549, Chemical analysis methods of glass marble and vitreous fiber

GB/T 2680, Determination of light transmittance, solar direct transmittance, total solar energy transmittance and ultraviolet transmittance for glass in building and related glazing factors

GB/T 2828.1-2012, Sampling procedures for inspection by attributes - Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection

GB/T 4340.1, Metallic materials - Vickers hardness test - Part 1: Test method

GB 11614, Float glass

GB/T 15764, STANDARD definitions of terms relating to flat glass

GB/T 18680, The transparent conductive glass with indium-tin oxide films used in liquid crystal display

JC/T 2130-2012, Cover glass for windows of mobile electronic devices

#### 3 Terms and definitions

For the purposes of this document, the terms and definitions defined in GB

Test method for section defect of high aluminum silicate cover glass for touch panel is in accordance with relevant provisions in GB 11614.

#### 6.5 Curvature

In a batch of glass, take 3 pieces of 356mm × 356mm samples. Determine according to the bending test method specified in GB/T 18680. Take arithmetic mean as results.

#### 6.6 Microscopic waviness

In a batch of glass, take 3 pieces of 200mm × 200mm samples. Determine according to microscopic waviness detection method specified in GB/T 18680. Take arithmetic mean as results.

#### 6.7 Visible light transmittance

On the product glass, take 3 pieces of 50mm × 50mm samples. Test according to the method specified in GB/T 2680. Visible light transmittance measurement results shall take the arithmetic mean.

#### 6.8 Chemical strengthening properties

#### 6.8.1 Sample processing

Processing equipment: stainless steel chemical tempering furnace; heating range: room temperature to 550°C.

Use analytically pure potassium nitrate molten salt, glass with a thickness of not less than 0.3mm and not more than 0.7mm to perform ion exchange treatment at 430°C for 6.5h. For glass with a thickness greater than 0.7mm and not more than 1.10mm, perform ion exchange treatment at 430°C for 7h.

#### 6.8.2 Stress layer depth and surface stress

#### 6.8.2.1 Sample

Take 3 pieces of 100mm × 100mm glass samples produced by chemical strengthening. Wash with distilled water sample before testing, and leave it at room temperature for more than 4h.

#### 6.8.2.2 Test equipment

Use fully automatic surface stress gauge that simultaneously measures surface stress and stress layer depth. Stress measurement circumference: 0MPa  $\sim$  2000MPa, stress measurement accuracy: not less than 20 MPa. Stress layer depth measurement range: 0 $\mu$ m  $\sim$  200 $\mu$ m, stress layer depth test accuracy: not less than 5 $\mu$ m.

batch of glass are qualified. If the number of unqualified pieces is not less than the rejection number in Table 10, the above indicators of the batch of glass are unqualified.

For chemical composition, visible light transmittance, stress layer depth and surface stress, Vickers hardness, flexural strength, after the sample is tested, if qualified, the above indicators of the batch of glass are determined to be qualified.

For impact resistance, when 5 pieces or more are qualified, it is determined that the impact resistance of the batch of glasses is qualified. When 3 or less passes, it is determined that the impact resistance of the batch of glass is unqualified. When 4 samples are qualified, 6 additional samples are retested. When all 6 pieces are qualified, it is determined that the impact resistance of the batch of glass is qualified.

If all the test items are qualified, the batch of glass is determined as qualified. If one or more of the item indicators are unqualified, it is determined that the batch of glass is unqualified.

# 8 Packaging, marks, transport, storage

#### 8.1 Packaging

- **8.1.1** Glass shall be packed in wooden boxes or containers (racks). Boxes (racks) shall be easy to load, unload and transport. The number of packages per box (rack) shall be compatible with the strength of the box (rack). A box (rack) shall be filled with glass of same thickness, size and grade.
- **8.1.2** The product packaging site shall be clean and free of flying dust. The glass shall be lined with mildew-proof paper or mildew-proof powder. The paper is flat, smooth and clean, no streaks or pleats. Glass plates shall be kept clean and dry.
- **8.1.3** The product is packed in plastic cloth and put into a wooden box or other packaging. The plastic cloth shall be placed with a desiccant.

#### 8.2 Marks

The glass packaging shall have a mark or label indicating the product name, manufacturer, registered trademark, site, quality grade, size, thickness, quantity, date of manufacture, direction of drawing and standard number, and printed with "handling with care, fragile, water and moisture proof" in words or marks.

The products produced in float glass process shall indicate tin surface or upper and lower surfaces of glass.

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