
**QUALITY SPECIFICATION OF
POLISHED WIRED PLATE GLASS
(Export Quality)**

Establishment :28 April, 2000

QUALITY ASSURANCE & RESPONSIBLE CARE DIV.
FLAT GLASS & CONSTRUCTION MATERIALS DIV.
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1. Scope

This standard specifies the polished wired plate glass used in glazing.

However, the agreed items between AGC and buyer take precedence of this standard.

2. Classification

2.1 The polished wired plate glass shall be classified as shown below according to the types of wire.

- (1) Polished Crosswire
- (2) Polished Hishwire
- (3) Polished Asahiline

2.2 The polished wired plate glass shall be classified as shown below according to thickness.

- (1) 6.8 mm
- (2) 10 mm

3. Quality

3.1 Appearance quality

The appearance quality shall be shown in Table1.

Table 1 Appearance

Item of defect	Size of defect		Upper limit of permissible number of defects
Inclusion and Spherical bubble	d < 0.2		Allowable
	2.0 ≤ d		0
Oval bubble Broken Bubble	Width	Length	Allowable 0 allowable 0
	1.0 < d	d < 15.0	
	1.0 < d	d ≤ 15.0	
	1.0 ≤ d	d < 5.0	
	1.0 ≤ d	d ≤ 5.0	0
Gassing of wire	There shall be no visually observable defects from distance 500mm.		
Bubbles at Intersection point	Evaluated by defect sample.		
Scratch	There shall be no visually observable scratches from distance 2000mm.		
Crazing	There shall be no visually observable crazing.		
Linear and Zonal defects	There shall be no visually observable defects from distance 2000mm.		
Exposed mesh or parallel strands	Wire mesh or parallel strands shall be entirely embedded in the pane, not coming out through the surface. The depth of wire from glass surface shall be 0.8mm or more.		
Distortion of the mesh (Hishiwire)	The ratio of diagonals shall be 1 : 1.0 +/- 0.05.		
Broken wire	There shall be no broken wire.		
Waviness	There shall be no visually observable defects from distance 500mm.		
Wire rust	There shall be no visually observable defects from distance 500mm.		
Bow of wire (Crosswire)	Less than 15mm against glass dimension 1000mm		
Space of wire (Asahiline)	50 +/- 3 mm		
Warpage	0.2 % or less		
Stain	There shall be no stain which exerts an influence on seeing through.		
Chipping	Length or width shall be less than 50mm.		
Corner off	Length or width shall be less than 25mm.		
Corner on	Length or width shall be less than 25mm.		
Slicing off	2 mm or less		

Notes 1: The value of diameter of bubble and inclusion shall be the largest external diameter.
In the value of diameter, halo part is not included.

3.2 Fire performance

The polished wired plate glass shall be subject to the heating test stipulated in 6.2 of JIS R 3204.

For 60 minutes after heating start, no interstice shall be produced between pane and frame, which may be detrimental to fire performance.

In addition, by the impact test after heating test stipulated in 6.2, no destruction, detachment, or no falling shall develop, which may be detrimental to fire performance.

Remarks : Crazing in the glass pane, normal heat warping and heat deformation of the glass pane during the heating test are permissible.

If there is no harmful interstice detrimental to fire performance, partial breaking of wire is permissible.

3.3 Application of anti-rust oil

The polished wired plate glass shall be applied anti-rust oil to edge.

4. Dimension

4.1 Thickness and tolerance

The range of thickness shall be as shown in Table 3.

Table 3 Range of thickness

Classification of product	Nominal thickness	Range of thickness (mm)
Crosswired glass	6.8 mm	6.20 – 7.40
Hishiwired glass	6.8 mm	6.20 – 7.40
	10 mm	9.10 – 10.90
Asahiline	6.8 mm	6.20 – 7.40
	10 mm	9.10 - 10.90

4.2 Tolerance on length and width

The tolerance of length and width shall be shown in Table 4.

Table 4 Tolerance of length and width

Nominal thickness	Tolerance (mm)
6.8 mm	+/- 2.0
10 mm	+2, -3

5. Test method

5.1 Appearance test

The appearance shall be verified as follows.

- (1) Detection of wire mesh or parallel strand exposure, inclusion of foreign substance, crazing, gassing from wire, bubble occurring intersecting point, scratch, linear and zonal defects, broken wire, wire rust and stain shall be conducted visually at a distance about 50 cm from the test specimen under an appropriate illuminance.
- (2) distortion of the mesh, bow, space, corner on, Corner off, chipping, slicing off and protrusion shall be measured with a metal rule graduated in 0.5 mm specified in JIS B 7516.
- (3) Warpage shall be measured with the specimen stood up-right so that no external deforming force is

given to it, by horizontally contacting a straightedge; the measurement of the height of arc for the length of chord shall be made for bowing, and the depth of trough (or height of peak) for the distance from peak to peak (or from trough to trough) shall be measured for corrugation. The warpage shall be calculated from the following equation:

$$C = (h/L) \times 100$$

where C : warpage (%)

h : height of arc, depth of trough or height of peak (mm).

L : length of chord, distance from peak to peak or distance from trough to trough (mm)

5.2 Heating test and impact test after heating

The heating test and impact test after heating shall be implemented as follows.

(1) Heating furnace

A heating furnace per 3 (heating furnace) of JIS A 1311 shall be used.

(2) Test specimen

The test specimen shall be a 'mesh' wired glass the entire circumference of which is held in an iron

frame, with a bite of 20 mm. The 'mesh' wired glass shall be cut to 1,800 x 900 mm, without processing the edge. The test specimen shall be installed in the furnace, with the longer side running vertically.

Two test specimens of 'mesh' shall be prepared, one for heating the patterned side and the other for heating the side without pattern.

Remarks

1 : The material inserted between glass pane and iron frame shall be a molded ceramic fiber product with a minimized heating loss and a maximized elasticity at temperatures of 1000 degrees Centigrade or more. The sectional dimensions before insertion shall be as shown in Fig. 1 of JIS R 3204.

2 : The setting block installed for positioning the glass bottom side shall hold the glass pane at temperatures of 1000 degrees Centigrade or higher.

5.3 Measurement of thickness

The thickness shall be measured, approximately at the center of the side, at the thickest point n early 15 mm from the periphery, with a micrometer graduated in 0.01 mm specified in JIS B 7502 or an instrument having an equivalent or superior accuracy.

The measured value shall be rounded to the first decimal place in accordance with JIS Z 8401.

5.4 Measurement of the length and width

The length and width specified in 6.4 shall be determined by measuring the distance between two cut lines parallel to the sides with a steel tape measure graduated in 1 mm specified in JIS B 7512.

6. Inspection

For inspection of polished wired plate glass, a test shall be conducted in accordance with the provision in 5, and the results shall satisfy the requirements in 3 and 4. This test can be omitted, except when designing a new product or modifying the product specification or manufacturing conditions.

7. Packaging

Polished wired plate glass shall be packaged with suitable shock absorbing material.

8. Marking

The following items or their abbreviations shall be marked on each package of polished wired glass .

- (1) Kind of product
- (2) Nominal dimensions of length and width
- (3) Manufacturer's name or abbreviation

End