

PRODUCT ACCEPTANCE STANDARD FOR INSULATED GLASS UNITS

SCOPE

1. STANDARDS COMPLIANCE
2. IDENTIFICATION
3. SIZE RANGE
4. MINIMUM CHARGES
5. DIMENSIONAL TOLERANCES
6. GLASS – SCRATCHES, BLEMISHES, MARKS & INCLUSIONS
7. ROLLER WAVE DISTORTION
8. VISUAL QUALITY
9. EDGE QUALITY
10. CRACKS
11. SPACER BAR

1. STANDARDS COMPLIANCE

Chevron Insulated Glass Units are supplied in accordance with this Product Acceptance Standard and conform to the following Australian Standards.

AS/NZS 2208	“Safety Glazing Materials in Buildings”
AS/NZS 2080	“Safety Glass for Land Vehicles”
AS1288	“Glass in Buildings-Selection & Installation”
AS/NZS 4667	“Quality requirements for cut to size and processed glass”
AS/NZS 4666	“Insulated Glass Units”

2. IDENTIFICATION

All Chevron Insulated Glass Units are supplied with marking on the spacer bar which verifies manufacture by Chevron Glass, reference to AS/NZS 4666 and the date of manufacture.

All toughened glass panels incorporated into Chevron Insulated Glass Units will be supplied with an appropriate Chevron Glass stamp or label.

This stamp/label verifies glass manufactured by Chevron Glass, our licence number, glass thickness and conformity to AS/NZS 2208 or AS/NZS 2080 standards certification.

Where a stamp is not required on toughened glass panels, this must be specified by the customer at the time of order placement.

3. SIZE RANGE

- Minimum unit size 180 x 350mm
- Maximum unit size 2800 x 4500mm

4. MINIMUM CHARGES

A minimum invoice value applies.

A minimum price per panel applies.

A minimum charging size of 0.3m² per unit applies.

Surcharges apply for argon filling, simple shaped units and stepped units.

5. DIMENSIONAL TOLERANCES

5.1 THICKNESS TOLERANCE GUIDE

Refer to AS 4666, Table 5.8, Page 39

5.2 ALLOWABLE TOLERANCES FOR IGU THICKNESS

Refer to AS 4666, Table 5.9, Page 39

5.3 GLASS ALIGNMENT/OFFSET

The glass panes shall align as close as possible so as to aid installation and ensure that the unit cures with no slippage stress on the sealant. The end result with glass alignment shall be to ensure that the following are kept within tolerance:

(a) The sealant depth is not less than the minimum requirements.

(b) The overall dimensions are not greater than the dimensional tolerances.

5.4 SQUARENESS

Refer to AS 4666, Paragraph 5.8.4.3, Page 40

5.5 FLATNESS (BOW)

Refer to AS 4666, Paragraph 5.8.4.4, Page 40

The maximum variation in flatness measured in accordance with Appendix A (page 43) shall be as follows:

Unit with longest dimension mm	Flatness mm
0.0 to 600	1.0
601 to 1000	2.0
1001 to 1500	3.0
1501 to 2500	5.0
2501 to 3500	7.0

6. GLASS - SCRATCHES, BLEMISHES, MARKS AND INCLUSIONS

Scratches to the primary vision area are unacceptable if visible from a distance of 3m. If detailed inspection is required, glass shall be viewed in a perpendicular position using a daylight background. Glass panels requiring this degree of inspection should not be viewed when they are standing in direct sunlight and the viewing period shall not be more than 60 seconds.

Refer to AS 4666, Table 5.5, Page 27 and subsequent notes.

7. ROLLER WAVE DISTORTION

- An inherent consequence of the heat treatment process is roller wave which is caused by the heated, slightly softened glass being in continual contact with the oscillating ceramic rollers. This distortion is more noticeable in reflective or dark tinted glasses and if applicable, the direction of roller wave should be specified.
- Roller wave on heat strengthened and toughened laminated glass not to exceed 0.15mm over 300mm.
- Edge kink not to exceed .25mm in 300mm.

8. VISUAL QUALITY

- **PILLOWING**

Pillowing is a result of changes in internal and external temperature and pressure. This effect is unavoidable and therefore considered acceptable.

- **NEWTON'S RINGS**

Newton's Rings is a visual effect consisting of irregular coloured circles similar to a rainbow or oil stain on the glass. They occur near the centre of large insulating glass units when changes in atmospheric pressure cause the glass to deflect to the point where each pane touches. It may indicate that the spacer width is too small, the internal pressure and /or the glass thickness is insufficient.

- **BREWSTERS FRINGES**

Brewsters Fringes is a visual effect with the appearance of a rainbow within an insulating glass unit. It is not a fault in the unit or the glass. It can occur only with high quality float glass insulated glass units as a consequence of using two glasses of exactly the same thickness and precise parallel (flat) surfaces. The multiple reflections of light within one glass can combine with the reflection within the other glass to form faint coloured bands of irregular shapes.

Brewsters Fringes can occur anywhere on the surface of the glass and can be avoided by using different thickness glass in each lite.

- **PREFERENTIAL WETTING PATTERNS**

Vacuum Lifting Aids, conveyer belts, rollers, brushes and labels can all be used during the manufacturing process of an IGU. Although they do not leave a residue, they can change the surface condition of the glass, which may be visible under certain conditions. In particular when the glass surface is wet or steamed, water beading may take on the shape of the device used during manufacture.

This does not affect the performance of the unit and the preferential wetting pattern may dissipate over time with cleaning and normal surface weathering.

Whilst the appearance is noticeable under certain conditions it is not a basis for rejection of the unit.

9. EDGE QUALITY

Refer to AS 4666, Table 5.2, Page 24

10. CRACKS

Cracked or broken panels are not acceptable.

11. SPACER BAR

Refer to AS 4666, Table 5.4.7.1, Page 30

Effective: 13/08/2019

Replaces: 26/02/2018