CNCGLASS

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TECHNICAL NOTE & PERFORMANCE SUMMARY

CNCGLASS Ionoplast Interlayer Laminated Glass — Safety Performance to GB 15763.3-2009

1. Purpose and Scope

This technical note summarises the safety performance of architectural laminated glass fabricated with the **CNCGLASS ionoplast interlayer**, evaluated against GB 15763.3-2009, *Safety glazing materials in building — Part 3: Laminated glass and laminated safety glass*. The test programme covered the four durability and impact requirements of the standard: humidity resistance, radiation resistance, heat resistance, and resistance to interlayer delamination under ball impact. All tested items conform to the requirements of GB 15763.3-2009.

2. Test Specimens

Laminated makeup	6 mm clear glass + 0.76 mm CNCGLASS ionoplast interlayer + 6 mm clear glass
Overall thickness	12.76 mm nominal (measured 12.44–12.49 mm on impact specimens)
Specimen dimensions	300 × 300 mm, 300 × 76 mm and 610 × 610 mm, per test item

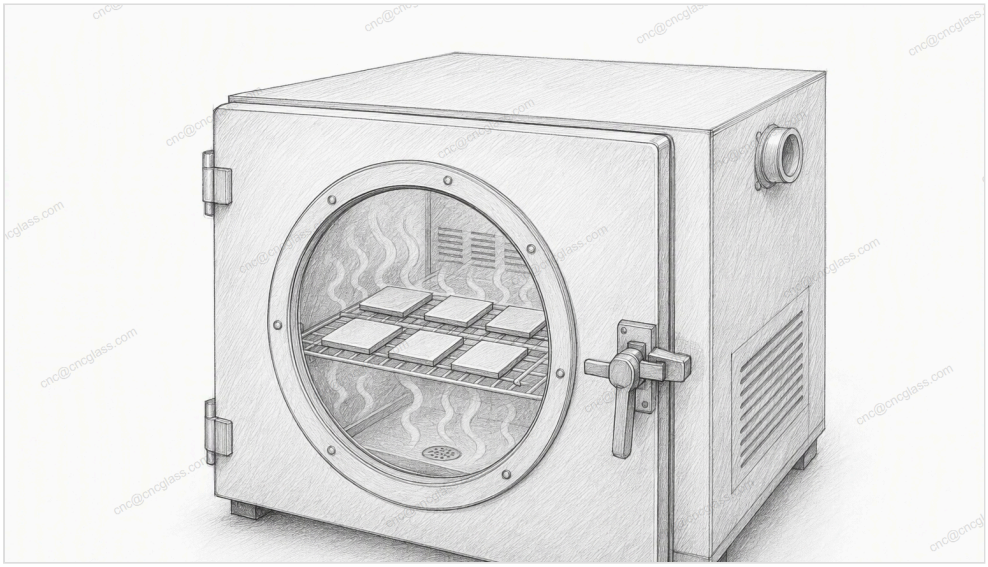


Fig. 1 — Environmental durability testing: specimens racked inside a humidity / radiation / heat exposure chamber.

3. Test Methods and Results

Test item	Test conditions	Result	Assessment
Humidity resistance	50 ± 2 °C, 95 ± 4% RH; 3 specimens, 300 × 300 mm	No change in any specimen after exposure; no bubbles or defects beyond the allowable edge distances	Conform
Radiation resistance	100 h irradiation at 42.0–47.2 °C; 3 specimens, 300 × 76 mm	Transmittance change 0.4%, 0.4%, 0.1% (limit 3%); no significant discoloration, bubbles or turbidity	Conform
Heat resistance	100 °C boiling water, 2 h; 3 specimens, 300 × 300 mm	No change in any specimen; no bubbles or defects beyond 13 mm from edges or cracks	Conform

Ball impact delamination resistance (610 × 610 mm, 1040 g steel ball)

Specimen	Thickness (mm)	Drop height (mm)	Post-impact observation
1	12.44	3000	Both glass plies fractured; interlayer unbroken and not exposed
2	12.47	3800	Both glass plies fractured; interlayer unbroken and not exposed
3	12.49	3000	One glass ply fractured; interlayer unbroken and not exposed
4	12.47	3800	Both glass plies fractured; interlayer unbroken and not exposed
5	12.46	3000	One glass ply fractured; interlayer unbroken and not exposed
6	12.48	3000	One glass ply fractured; interlayer unbroken and not exposed

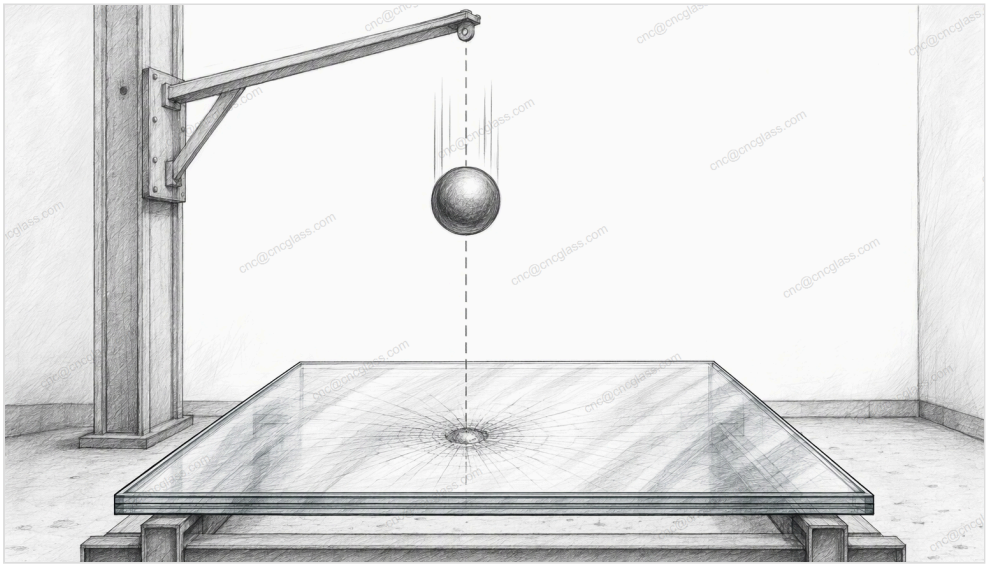


Fig. 2 — Ball impact test: a 1040 g steel sphere dropped from up to 3800 mm onto the horizontally supported laminated panel.

4. Discussion

The environmental sequence confirms the stability of the laminate under the three principal ageing drivers. After sustained humidity exposure (50 °C / 95% RH), boiling-water immersion (100 °C / 2 h) and 100 hours of radiation, no specimen developed bubbles, discoloration, turbidity or edge defects, and the visible

transmittance of irradiated specimens changed by no more than 0.4% — well within the 3% limit of the standard.

The ball impact test is the decisive check on post-breakage behaviour: a 1040 g steel ball dropped from 3000 mm and 3800 mm fractured the glass plies in all six specimens, yet in every case the CNCGLASS ionoplast interlayer remained unbroken and was never exposed by spalling fragments. This is precisely the break-safe performance that GB 15763.3-2009 requires of laminated safety glass, and it demonstrates the interlayer's ability to retain the fractured glazing as a coherent panel.

5. Conclusion

Laminated glass made with the CNCGLASS 0.76 mm ionoplast interlayer (6 mm + 0.76 mm + 6 mm) passed all tested items:

Humidity, radiation, heat resistance and ball impact delamination — all conform to GB 15763.3-2009.

This qualifies the construction for use as laminated safety glazing in building applications under the Chinese national safety glazing standard.

This document is a CNCGLASS technical note and performance summary. It is not a third-party test certificate or a certificate of conformity, and it does not authorise the use of any third-party laboratory mark.

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