CNCGLASS

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TECHNICAL NOTE & PERFORMANCE SUMMARY

CNCGLASS White Opaque EVA Interlayer Film — QC Performance Summary for Architectural Laminated Glass

1. Purpose and Scope

This technical note summarises the quality-control performance of the **CNCGLASS ultra-white opaque EVA interlayer film**, a milky-white, light-blocking laminating film for architectural glass processing. Laminated with two plies of glass, the film produces a clean, uniformly white, translucent-free panel for privacy glazing, spandrel and decorative laminates where light transmission is not wanted. The evaluation covers appearance and dimensional quality, optical properties, mechanical properties, crosslinking behaviour, recommended lamination processing and storage. The film is produced in conformity with EN 14449:2005 and EN ISO 12543-4:2011, the European product standards for laminated glass and laminated safety glass, and is qualified for outdoor service.

2. Product and Appearance Quality

Nominal thickness	0.38 mm
Colour / opacity	Ultra-white, opaque
Surface finish	Matte embossed
Wrinkles	Good — none detected
Contamination (Φ ≤ 0.5 mm per 10 m²)	Good — none detected
Bubbles (Φ ≤ 0.5 mm per 10 m²)	≤ 1
Inclusions (Φ ≤ 0.5 mm per 10 m²)	Good — none detected

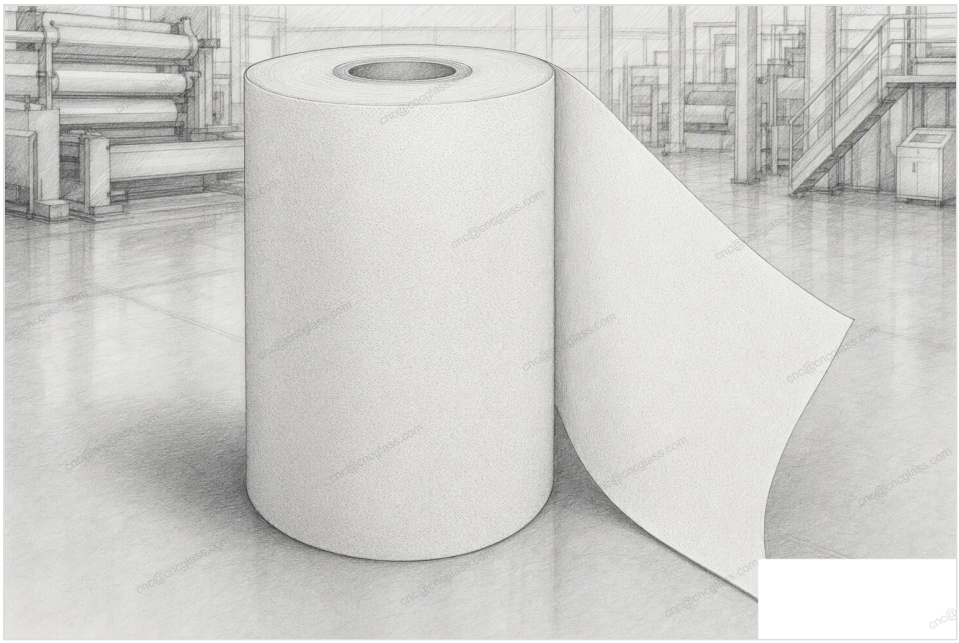


Fig. 1 — CNCGLASS ultra-white opaque EVA interlayer film in roll form with matte embossed surface.

3. Optical Properties

Property	Measured value		
	1 layer	2 layers	3 layers
Light transmittance	0.5%	0.2%	0.1%
Haze	98.14%	98.16%	98.17%
UV blocking (280–380 nm)	99.62%	99.94%	100%

A single film ply transmits only 0.5% of light, falling to 0.1% with three stacked plies — the film is effectively opaque, delivering the uniform white, privacy appearance required of opaque laminated glazing. Ultraviolet blocking reaches 99.6% for one layer and is complete (100%) for three layers across the 280–380 nm band, protecting adhesives, coatings and interior finishes behind the laminate from UV degradation. The very high measured haze is characteristic of the matte embossed surface, which assists de-airing during lamination and does not affect the finished panel appearance, since the film is fused between the glass plies.

4. Physical and Mechanical Properties

Property	Result	Remark
Young's modulus	8.6	As measured
Water absorption	< 0.1%	Low moisture uptake
Tensile strength	13.7 MPa	—
Elongation at break	561.1%	High ductility
Adhesion to glass	120.2 N/cm	Peel strength
Adhesion to PET	> 40 N/cm	For laminates combining PET decorative layers
Crosslink degree	72.2%	See Section 5

The mechanical profile combines adequate tensile strength with very high elongation, allowing the interlayer to absorb thermal and mechanical stress in service. Adhesion of 120.2 N/cm to glass and more than 40 N/cm to PET film ensures durable interfacial bonding, including decorative laminates built with PET interlayers.

5. Crosslinking and Lamination Processing

The crosslink degree of 72.2% was determined by xylene extraction: specimens were refluxed in xylene at 140 ± 3 °C for five hours, drained, then dried in a vacuum oven at 140 ± 3 °C for three hours and cooled to room temperature. A crosslink degree above 70% indicates thorough cure, which correlates with stable mechanical properties and long-term moisture resistance of the laminated panel.

Recommended lamination, step 1	80 °C for 20 minutes
Recommended lamination, step 2	120 °C for 60 minutes

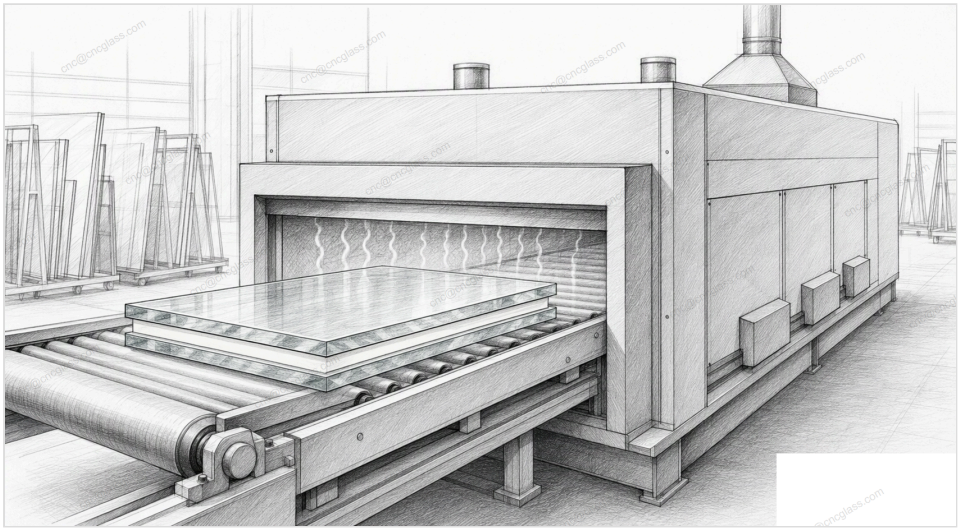


Fig. 2 — Glass lamination: the glass + white opaque EVA + glass assembly is cured under heat in the laminating line.

6. Storage and Compliance

Storage conditions	Ambient temperature, protected from sunlight, sealed, no heavy loading
Shelf life	Eight months in sealed packaging
Service environment	Outdoor
Product conformity standards	EN 14449:2005 and EN ISO 12543-4:2011 (laminated glass / laminated safety glass)

7. Conclusion

> The CNCGLASS 0.38 mm ultra-white opaque EVA interlayer film passed the full QC inspection:
>
> **Appearance, optical, mechanical and crosslinking requirements all conform.**

With near-zero light transmission, complete ultraviolet blocking, high peel adhesion to both glass and PET, and a 72.2% crosslink degree under the recommended two-step lamination cycle, the film is qualified as a white opaque interlayer for architectural laminated glass in privacy, spandrel and decorative applications.

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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