MATT EMBOSSED · DIFFUSE LIGHT · OUTDOOR USE

Cool Jade White EVA Interlayer Film for 120 °C Lamination

> *A 0.38 mm matte-embossed white EVA interlayer. It does not try to be invisible: it turns a laminated pane into a diffusing sheet, spreads daylight evenly and softens the view behind it.*

01 WHAT THE FILM IS FOR

Cool Jade White is a white, translucent EVA interlayer with a matte, frosted emboss on both faces. Where a clear interlayer is chosen to disappear, this one is chosen to be seen: it diffuses light rather than transmitting an image, so it is used where a pane has to stay bright without becoming a window.

Typical work is decorative and privacy glazing, backlit and illuminated panels, spandrel and balustrade infill, shopfronts and partitions that need an even, milky-white surface from either side. The film is rated for outdoor service, so facades and canopy work fall inside its intended range.

The figures in this note come from a quality-control programme run on production film: appearance and dimension, optical behaviour at one, two and three film layers, mechanical properties, adhesion, crosslink degree and the lamination cycle used to make the test panels.

02 APPEARANCE AND DIMENSIONAL INSPECTION

TABLE 1 · APPEARANCE AND DIMENSIONAL RECORD

CHARACTERISTIC	RECORDED VALUE
Thickness	0.38 mm
Surface finish	Matte, frosted embossed
Wrinkles	None visible
Contamination	No visible contamination
Bubbles	≤ 1 per 10 m^2, larger than 0.5 mm
Inclusions	None visible

Inspection basis. Visual inspection of finished film; bubble and particle counts are quoted per 10 m^2 of film area, counting features larger than 0.5 mm.

03 OPTICAL BEHAVIOUR

The numbers below were measured on laminates built with one, two and three plies of the same film. Transmitted light falls as plies are added, while haze and ultraviolet blocking rise — the expected signature of a diffusing white film.

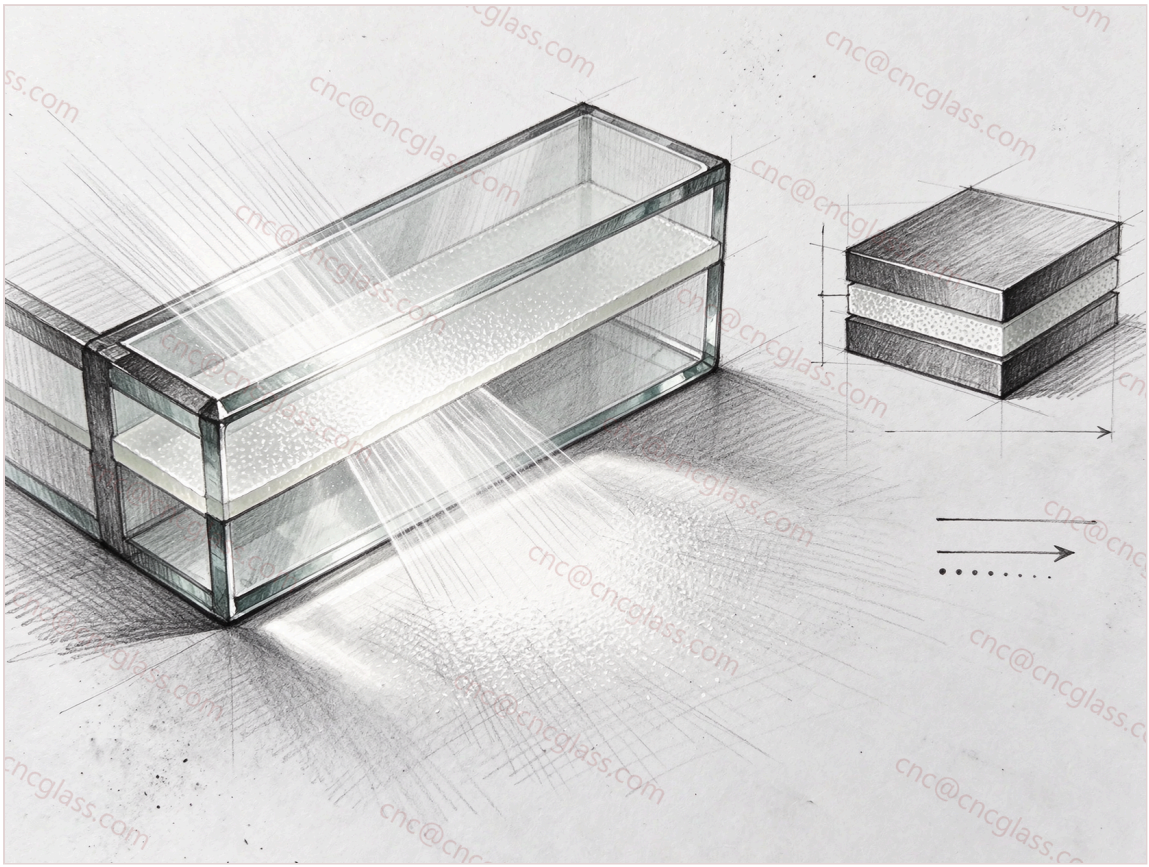
TABLE 2 · OPTICAL VALUES BY NUMBER OF FILM LAYERS

FILM LAYERS	VISIBLE LIGHT TRANSMITTANCE %	HAZE %	UV BLOCKING 280–380 NM %
One layer	25.4	93.27	89.69
Two layers	13.3	96.97	96.19
Three layers	8.9	97.41	97.40

Ultraviolet resistance of the film itself was checked and recorded as satisfactory.

THE THREE NUMBERS THAT DECIDE HOW IT LOOKS

One ply: 25 % of visible light through, 93 % haze · Three plies: 9 % through, 97 % haze, 97 % of UV below 380 nm blocked



Diffuse transmission. Parallel light entering a laminated pane is scattered by the white interlayer and leaves as an even, soft field instead of an image.

04 MECHANICAL AND PHYSICAL PROPERTIES

TABLE 3 · PHYSICAL AND MECHANICAL VALUES

PROPERTY	UNIT	VALUE
Mass per unit area	g/m²	330
Young's modulus	MPa	4.6
Tensile strength	MPa	22.2
Elongation at break	%	1,793.2
Adhesion to glass	N/cm	89.3
Adhesion to PET	N/cm	> 40
Water absorption	%	< 0.1
Melting point	°C	Not determined in this programme

Reading the adhesion values. Adhesion is quoted per centimetre of peel width. The glass figure is the value that matters for a laminated pane; the PET figure covers assemblies where the film is bonded to a polyester carrier or a coated surface.

05 CROSSLINK DEGREE AND LAMINATION CYCLE

Crosslink degree is the check that tells you whether the film has cured through the press. It is measured by extracting an uncrosslinked fraction in boiling xylene and weighing what is left:

- **Method.** The specimen pack is refluxed in xylene at 140 ± 3 °C for five hours, hung to drain, dried in a vacuum oven at 140 ± 3 °C for three hours, then cooled to room temperature before weighing.
- **Result.** 88.3 % crosslink degree on the film as produced.

The panels behind every optical and mechanical figure in this note were laminated on this cycle:

STEP 01	STEP 02	RESULT
80 °C hold for 20 min	120 °C hold for 60 min	Clear, even white laminate

On the 120 °C figure. It is the second-step hold temperature used for these test panels, not a service-temperature rating of the finished laminate. Panel geometry, glass thickness and press behaviour will move the practical window, so confirm it on a trial panel before a batch is committed.

06 STORAGE, SHELF LIFE AND ASSESSMENT BASIS

- **Storage.** Keep sealed at ambient temperature, out of direct sun, with no load stacked on the roll.
- **Shelf life.** Eight months in the sealed pack; open and use the roll in sequence rather than leaving part-used rolls standing.
- **Service.** Rated for outdoor exposure when laminated between glass plies.

The programme follows the test methods of EN 14449 and EN ISO 12543-4 for laminated glass; the results describe the film and the laminates built for the programme, not a certified product.

Choosing a build-up is a matter of how much of the view has to survive. At one ply the pane still gives a soft impression of what lies behind it; at three plies it reads as a solid white face and suits backlit and spandrel work. Haze stays above 93 % at every build, so the film never resolves an image: what changes with plies is brightness, not legibility.

STATUS OF THIS DOCUMENT

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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