

# CNCGLASS

Brand: **CNCGLASS**

Company: **CNC Ucolin Interlayer Technology Co., Ltd.**

Address: SHENZHEN, GD, CHINA

Peter Lin | cnc@cncGlass.com | WhatsApp/Mobile +86 15013829504 | WeChat wecan365 | www.cncglass.com

## TECHNICAL NOTE

### How to Test EVA Film Safety Laminated Glass

By Peter Lin

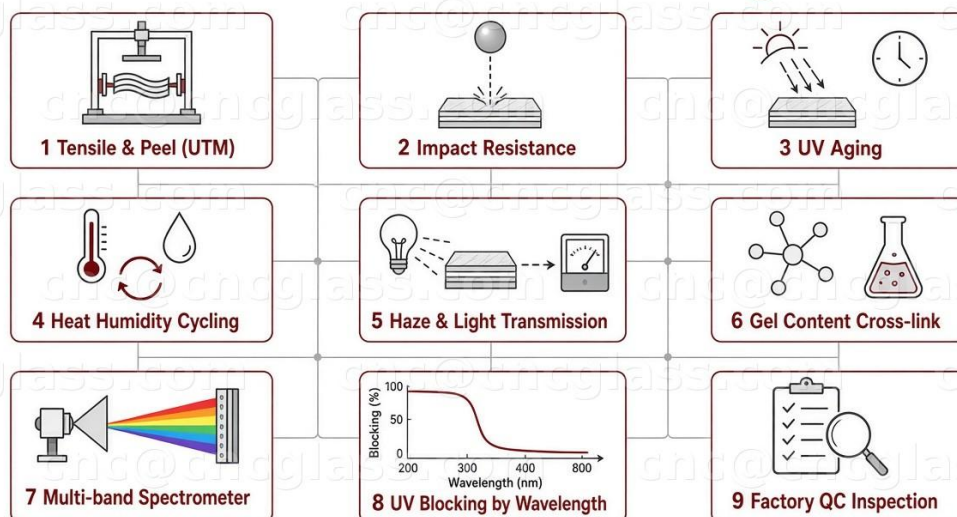
## CNCGLASS · Purpose

This technical note summarizes practical workshop and laboratory equipment options for testing EVA film and EVA safety laminated glass — mechanical, impact, aging, optical, and cross-link checks that support process control and product screening.

Formal project acceptance and sale/export certification must follow the applicable regional standard and, where required, an accredited laboratory. ISO 12543-4 is a common international durability framework for laminated glass (high temperature, humidity, radiation).

This note is an equipment overview — not a substitute for the standard method or class.

## EVA Laminated Glass Test Categories



Principle map — EVA laminated-glass test categories: tensile/peel, impact, UV aging, heat/humidity cycling, haze & light transmission, gel content, multi-band spectrometer, UV blocking by wavelength, and factory QC.

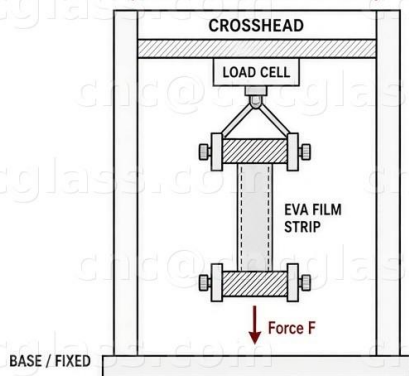
## CNCGLASS · 1. Tensile Strength & Adhesive / Peel Strength

**Equipment:** Universal Testing Machine (UTM).

- Measure tensile strength of the EVA film itself.
- Measure peel strength (adhesive strength) between EVA and the glass surface, or between a polymer sheet and EVA, after laminating heat / cross-linking.

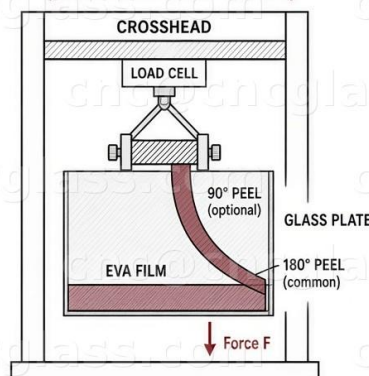
Peel / adhesion after cure is a key process control signal: under-cure, contamination, or wrong EVA grade often shows first as weak peel results.

### TENSILE OF EVA FILM (EVA LAMINATED GLASS)



Vertical tensile pull until failure  
(measure tensile strength and elongation)

### PEEL TEST (EVA LAMINATED GLASS)



Peel EVA film from glass at 90° or 180°  
(measure peel strength / adhesion)

#### • Glass to EVA Adhesion after Cross-linking •

Principle sketch — Universal Testing Machine (UTM): tensile of EVA film, and peel / adhesive strength between glass–EVA (or polymer–EVA) after cross-linking.

## CNCGLASS · 2. Impact Resistance

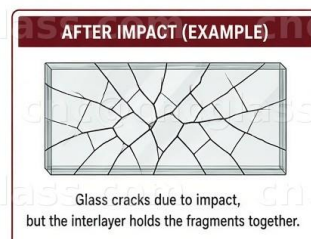
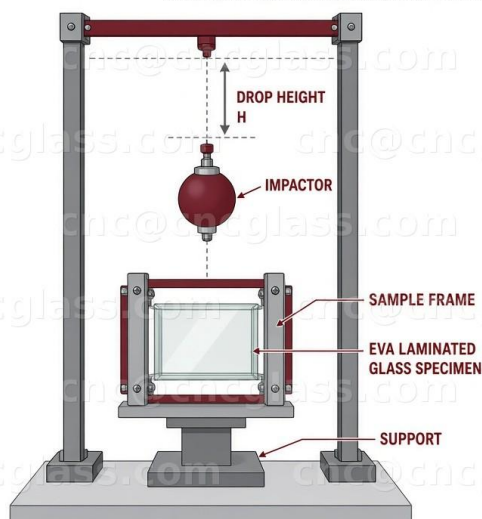
**Equipment:** Impact testing equipment for laminated glass.

- Use impact equipment to evaluate the impact resistance of laminated glass made with EVA film.

Safety laminated-glass impact classes typically follow regional standards (for example EN 12600 or ANSI Z97.1 style methods). Exact method and class depend on the destination market; the CNC list here is an equipment overview.

### IMPACT RESISTANCE TEST FOR EVA SAFETY LAMINATED GLASS

PRINCIPLE: A STEEL BALL OR PENDULUM IMPACTOR IS DROPPED FROM A SPECIFIED HEIGHT ONTO THE LAMINATED GLASS SPECIMEN TO EVALUATE IMPACT PERFORMANCE.



Principle sketch — impact resistance test for EVA safety laminated glass (impactor / drop height / framed specimen; interlayer holds fragments after cracking).

## CNCGLASS · 3. Aging / UV Radiation Resistance

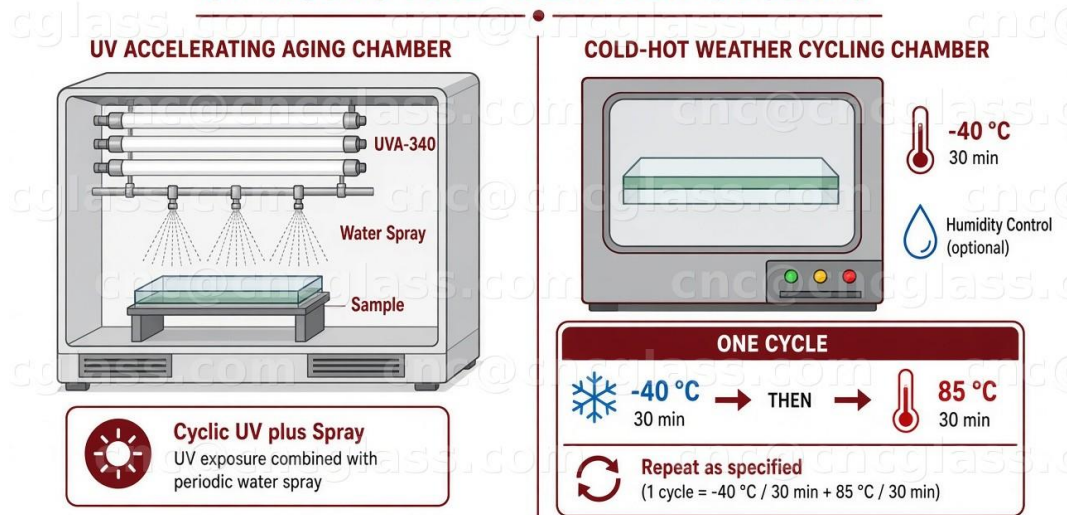
**Equipment:** UV accelerating aging tester (fluorescent UVA-340 + water spray).

- UVA-340 lamps plus a water-spray system simulate sunlight, rain, and humidity damage.
- EVA laminated-glass samples undergo cyclic UV radiation and water-spray exposure.

CNC descriptive claim: damage intensity in the accelerated chamber is described as more than 10× that of typical natural exposure — qualitative marketing language, not a calibrated SPF-equivalent factor.

Observed damage modes may include: fading, color change, delamination, haze, bubbles, embrittlement, aging, and oxidation.

## UV AGING AND WEATHER CYCLING



Principle sketch — UV accelerating aging (UVA-340 + water spray) and cold-hot weather cycling (example: -40 °C / 30 min + 85 °C / 30 min per cycle).

### CNCGLASS · 4. Heat / Humidity / Weather Resistance

**Equipment:** Constant temperature and humidity chamber.

- Expose EVA laminated glass to high humidity and/or high temperature as specified for the project.
- Cold-hot cycling example from CNC guidance: **-40 °C for 30 minutes** and **85 °C for 30 minutes** as one cycle.

Cycle profile must match project and standard requirements (ISO 12543-4 style durability programs differ by clause). Treat the -40 °C / 85 °C example as CNC starting guidance, not a universal fixed recipe.

### CNCGLASS · 5. Haze and Visible-Light Transmission

**Equipment:** Haze tester.

- Measure haze of EVA laminated glass.
- Measure visible-light transmission (Visible level / light transmission) of the same laminated specimen.

Report haze and Visible level (light transmission) with the instrument method and sample thickness stated. Avoid product-style percentage claims without a measured method.

### CNCGLASS · 6. Cross-Link / Gel Content

**Equipment:** Gel content determination system for laminated EVA film.

- After laminating heating (cross-link reaction), measure gel content — the percentage of EVA that has cross-linked.

Industry literature often cites roughly ≥75% gel for a well-cured EVA encapsulant (GlassOnWeb / EVA lamination intros; related method families include ASTM D2765 and IEC 62788-1-6). Treat any numeric target as grade-dependent.

### CNCGLASS · 7. Easy Multi-Band Transmission

**Equipment:** Laminated glass spectrometer.

- Simultaneously measure transmission in the ultraviolet (UV), visible, and infrared (IR) bands.
- Self-contained light sources with automatic calibration — plug in, switch on, place the laminated sample in the opening, and read the display (no manual optical adjustment).

Useful for quick workshop screening of UV / visible / IR transmission before sending specimens to a full spectrophotometer method when required.

## CNCGLASS · 8. UV Blocking Rate by Wavelength

**Equipment:** Spectrophotometer.

- Measure the UV blocking rate of EVA laminated glass.
- Report blocking rate at selected wavelengths (avoid a single undefined overall “block rate”).

Prefer wavelength-resolved UV blocking curves when comparing EVA grades or decorative inserts that change optical response.

## CNCGLASS · Application — Factory / Lab QC

Combine visual inspection with selected mechanical, optical, and aging checks as part of incoming EVA film screening and finished laminated-glass QC. Keep records of equipment ID, method, sample ID, and pass/fail criteria tied to the customer specification.



Application — factory / lab QC inspection of finished EVA laminated-glass panels (visual check with haze and optical instruments nearby).

## CNCGLASS · Contact

**Brand:** CNCGLASS

**Company:** CNC Ucolin Interlayer Technology Co., Ltd.

**Address:** SHENZHEN, GD, CHINA

**Contact:** Peter Lin

**Email:** cnc@cncGlass.com

**WhatsApp / WeChat / Mobile:** +86 15013829504 · **WeChat:** wecan365

**Website:** [www.cncglass.com](http://www.cncglass.com)

CNC Ucolin Interlayer Technology Co., Ltd. · SHENZHEN, GD, CHINA · Peter Lin