

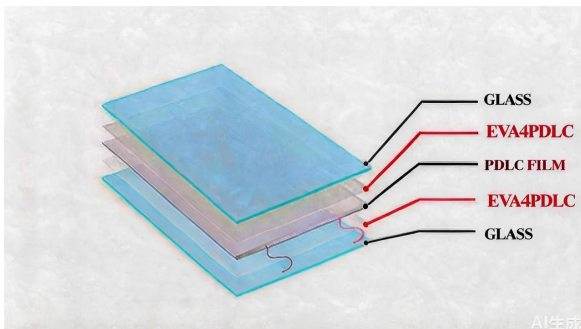
EVA4PDLC: Product Specification

Special EVA Film for Switchable Glass

I. Product Introduction

The Special EVA Film for Switchable Glass (EVA4PDLC) is a film-type product made primarily from Ethylene-Vinyl Acetate copolymer (EVA), compounded with various specialty modifiers and additives, which is then uniformly blended and extruded through a cast film process. The product is non-tacky at room temperature, making it convenient for handling and processing. Through heat lamination and curing, crosslinking and bonding enhancement chemical reactions occur, integrating the two layers of glass and the PDLC (Polymer Dispersed Liquid Crystal) switchable film into a single unit. EVA4PDLC is specifically designed for switchable glass, primarily serving to protect the PDLC film and provide excellent bonding strength.

The structural composition within switchable glass is illustrated as follows:



Advantages of EVA4PDLC

1. High transparency, high UV blocking performance, low attenuation value — effectively ensures the light transmittance of switchable glass, with a perfectly stable solar control system.
2. Extremely high adhesion strength to both glass and PDLC film — not only enhances glass shatter safety and fragment retention capability, but also effectively ensures the structural integrity of the finished switchable glass without delamination.
3. Low yellowing index — ensures no significant yellowing in the later stages of switchable glass usage, maintaining lasting aesthetic appeal.
4. High strength, high hardness, excellent weather resistance, and low water absorption — effectively protects the PDLC film and ensures the overall service life of the switchable glass.

II. Product Technical Parameters

Basic Physical Properties

Property	Test Item	Standard	Unit	Specification
Basic Properties	Haze	GB/T 2410-2008	%	< 0.2
	Light Transmittance	GB/T 2680-2021	%	≥ 91.5
	Hardness	GB/T 531-1999		79 HA
	Melting Point	GB/T 2680-2021	°C	72–78
	UV Block Rate	280 nm ~ 380 nm	%	> 99
	Tensile Strength	ISO 527-3-2003	MPa	≥ 20
	Elongation at Break		%	≥ 450
	180° Peel Strength	GB/T 2790-1995	N/cm	≥ 100
	Ball Drop Impact Resistance	GB 15763.3-2009	—	No failure
	Shot Bag Impact Resistance		—	No failure

Aging & Durability Performance

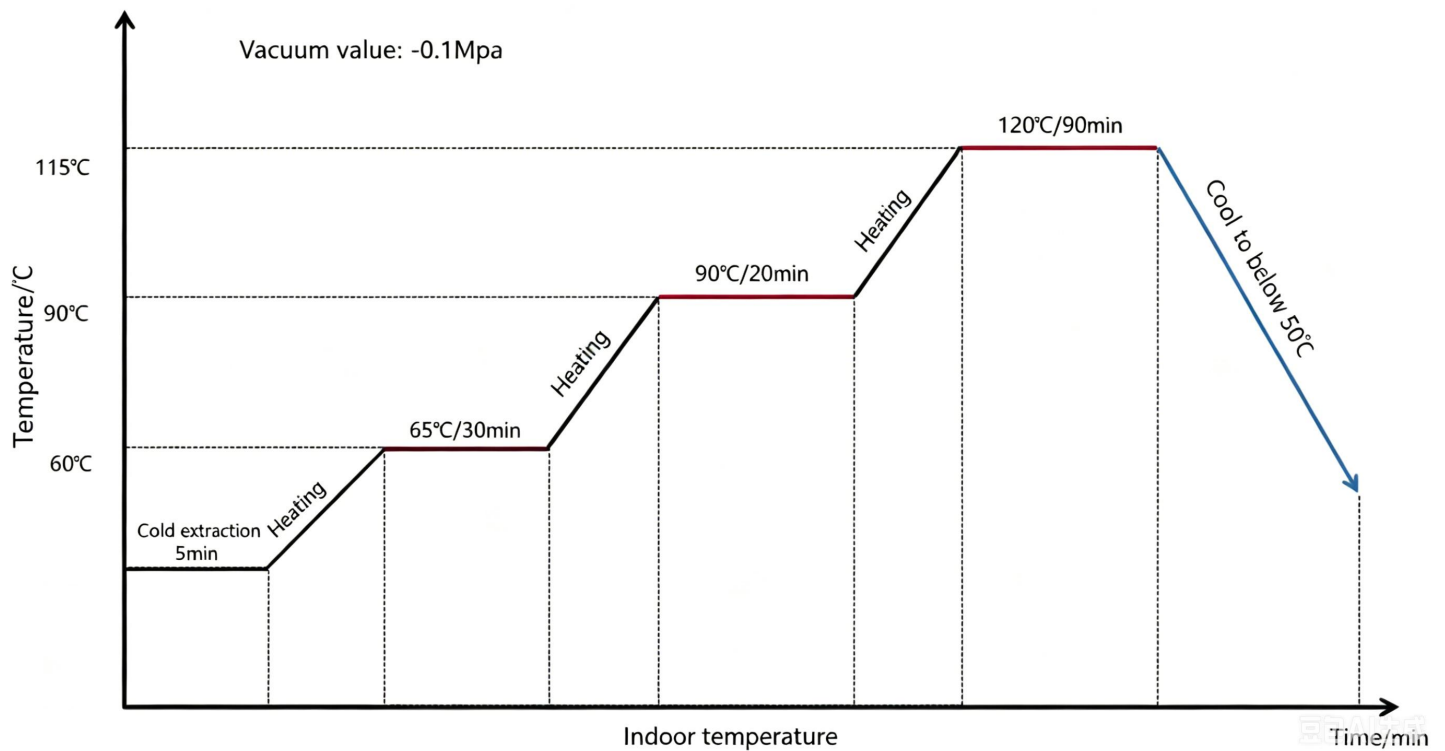
Test Condition	Test Item	Standard	Unit	Specification
85°C / 85% RH / 1000 h	Yellowing Index	HG/T 3862-2006	—	$\Delta YI \leq 2$
	180° Peel Strength	GB/T 2790-1995	N/cm	≥ 40
	Appearance	BJ LAB METHOD	—	No delamination, no bubbles
-40°C × 30 min ⇌ 80°C × 30 min, 50 cycles			—	$\Delta T \leq 0.5\%$
	UV Aging: 120 kW·h	Yellowing Index	GB/T 16422.3	—
Boiling Water Test · 2 h	Heat Resistance	GB 15763.3-2009	—	No delamination, no bubbles
Radiation Test: 2000 h		EN ISO 12543-4	—	No bubbles, no de-bonding, no haze

Product Specifications

Width	Thickness (mm)	Standard Length (m)	Packaging
2.0 m / 2.1 m / 2.2 m / 2.3 m / 2.4 m / 2.5 m / 2.6 m	0.76 mm	50	EPE Foam + PE Bag (vacuum sealed) + Kraft Paper
	1.14 mm	25	

III. Product Processing Guidelines

Recommended processing parameters for the EVA4PDLC switchable glass special EVA film (using 5 mm GLASS+ 0.76 mm EVA4PDLC + 5 mm GLASS as example):



Notes:

1. The temperatures shown on the process curve refer to the glass surface temperature.
2. The above process parameters are for reference only. During actual processing, adjustments should be made according to glass thickness, glass area, stacking method, processing environment, and equipment characteristics.
3. If poor transparency or fogging occurs after lamination, extend the holding time appropriately or increase the temperature.

IV. Product Storage and Usage

1. The product must be stored in a cool, dry, and temperature-controlled environment (temperature $\leq 25^{\circ}\text{C}$, humidity $\leq 60\%$).
2. Valid shelf life of this product: 12 months.
3. Avoid moisture exposure during use. After opening the packaging or after cutting, it is recommended to use within 48 hours.