

CNCGLASS

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TECHNICAL NOTE

Common Problems of EVA Film (Ethylene-Vinyl Acetate)

By Peter Lin

This technical note reviews common quality defects that can appear in ethylene-vinyl acetate (EVA) interlayer film when manufacturing, storage, or transport controls are weak—blocking between plies, insect contamination, black spots, holes, uneven color on colored film, transport knock marks, and yellowing—together with practical prevention points for laminated-glass buyers and fabricators.

CNCGLASS architectural EVA interlayer film is manufactured under controlled clean production conditions intended to limit dust, insect, and handling contamination that otherwise show up as visible film defects after lamination. Buyers should still inspect incoming rolls and qualify a new supplier with a small trial lot before bulk orders.

CNCGLASS · Defect Overview

When film manufacture or logistics quality is poor, the following defects are commonly reported on EVA interlayer rolls or cut sheets:

Defect	Typical origin (film manufacture / logistics)
Blocking / ply adhesion	Ultra-clear tackiness; high transport/storage heat; over-tight winding
Insect contamination	Inadequate pest control in the film production environment
Black spots	Hand / glove contamination during film handling
Holes in the film	Extrusion, casting, or winding defects in manufacture
Uneven color (colored film)	Incomplete or uneven colorant dispersion
Knock / impact marks	Rough handling or insufficient roll packaging in transport
Yellowing	Unstable formulation / poor ageing resistance; verify with a trial order

CNCGLASS · Blocking / Adhesion Between Plies

“Gluing” in older shop language means blocking: adjacent EVA plies stick together on the roll or stack so the film cannot be unwound or separated cleanly. Three frequent causes:

- **Ultra-clear (super-transparent) grades.** High-clarity EVA surfaces can show more surface tack. Where blocking risk is high, use a thin interleave membrane between plies—industry guidance also recommends interleave when warehouse temperature cannot be kept cool.
- **Excessive heat in storage or containers.** If container or storage temperature rises too high—source guidance cites conditions over about 65 °C—EVA can soften toward its melt range and plies stick together. Keep rolls in moisture-barrier packaging, away from direct sun and heat sources, and follow the film maker’s storage limits.
- **Over-tight winding on the roll.** Excessive winding tension during roll formation compresses plies and promotes blocking. This is a factory winding-control issue; tension should be set so the roll is firm but not crushed.

CNCGLASS · Insect Contamination

Insects embedded in or on the film (“mosquitoes” in older notes) are an environmental-control failure in the film plant. Production areas need pest management, screened openings, and hygiene rules so insects cannot reach the extrusion, casting, or winding line. Contaminated film should be rejected; insects that survive into a laminate become permanent optical defects.

CNCGLASS · Black Spots

Black spots are usually handling contamination: dirty hands, soiled gloves, or workshop dirt transferred onto the film surface. Operators should wear clean gloves, wash hands frequently, and keep lay-up and winding areas free of oil, carbon, and metal dust. Incoming inspection under good lighting catches most spot defects before lamination.

CNCGLASS · Holes in the Film

Pinholes or larger holes originate in manufacture—extrusion/casting defects, foreign matter, or damage during winding. They create optical voids and can seed bubbles or weak spots after lamination. Specify incoming visual inspection of full roll width and reject damaged lengths.

CNCGLASS · Uneven Color (Colored EVA Film)

On colored EVA film, streaky or blotchy color usually means the colorant was not mixed or dispersed well enough in the compounding step. Ask the supplier for batch color control, and compare samples from the start, middle, and end of a roll before accepting a colored lot for façade or decorative work.

CNCGLASS · Knock / Impact Marks from Transport

Impact or crush marks on rolls usually come from rough carrier handling or packaging that is too light for ocean/road transit. Prefer wooden crates or equivalent rigid protection for export rolls, mark orientation and stacking limits clearly, and photograph rolls on receipt before signing the delivery note.

CNCGLASS · Yellowing of EVA Film

Yellowing is primarily a formulation and ageing-resistance issue: acetate-group chemistry, residual peroxide, and inadequate stabilizers have historically given some EVA grades a reputation for yellow or brown discoloration. Moisture uptake on unprotected film can also promote color change. Modern architectural grades with proper stabilization perform much better—but quality still varies by manufacturer.

Practical buying rule: when working with a new supplier, place a small trial order, laminate and age-check samples under your own process, and only then commit to bulk quantity. Store unopened rolls in original moisture-barrier packaging, cool and dry, and re-seal opened rolls promptly.

CNCGLASS · Transparency Grades

By optical clarity, architectural EVA interlayer film is commonly grouped as ordinary transparent and super transparent.

- **Ordinary transparent.** Clarity is acceptable but lower than super-transparent grades. Often used when laminating with fabric or paper inserts, and generally positioned for indoor applications.
- **Super transparent.** Higher clarity grades are typically selected for outdoor or appearance-critical glazing. Some makers also offer indoor super-transparent film where maximum clarity is needed but UV-blocking performance is not required for the project.

CNCGLASS focuses on super-transparent architectural EVA interlayer film for laminated glass. Confirm UV and weathering requirements with the project specification before selecting an indoor-only grade.

CNCGLASS · Buyer Checklist

- Inspect rolls for blocking, spots, holes, color uniformity, and crush marks on receipt.
- Store cool and dry in original moisture-barrier packaging; use interleave where tack or heat risk is high.
- Qualify new suppliers with a trial laminate before bulk purchase—especially for yellowing and adhesion.
- Match ordinary vs super-transparent grades to indoor/outdoor and insert applications.
- Contact CNCGLASS for grade selection, sample rolls, and laminated-glass process support.

For film-quality questions, storage guidance, or sample evaluation of CNCGLASS EVA interlayer film, please contact us.

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