

TECHNICAL DATA SHEET

ES-VM Plus

Blackout-Grade Metallized PET Film

Product Description

ES-VM Plus is Expansteel's flagship product — a blackout-grade vacuum metallized PET film purpose-built for the curtain and window covering industry. With near-zero light transmittance and superior UV weather resistance, it is the preferred material for premium honeycomb blinds, blackout curtains, and outdoor applications requiring long-term durability.

Key Features

- Total blackout — light transmittance $\approx 0\%$
- UV weather resistance tested and passed
- High thermal reflectivity for energy efficiency
- Optimized for non-woven fabric lamination
- No aluminum peeling or fogging under prolonged sun exposure
- Ideal for hotel, hospital, and premium residential projects

Applications

Blackout Curtains | Honeycomb Blinds | Greenhouse | Industrial | Outdoor Applications

Technical Specifications

Property	Unit	Standard	Typical Value
Thickness	μm	12	12
Al Thickness (O.D.)	—	≥ 2.0	2.0
Al Adhesion	N/15mm	—	1.5
Surface Tension (Al side)	mN/m	≥ 48	54
Light Transmittance	%	≈ 0	≈ 0
Weather Resistance (UV)	—	Pass	Pass

Available: $6\mu\text{m}$ – $100\mu\text{m}$ thickness. Width and length customizable. Recommended: ES-VM Plus + Non-woven lamination → Blackout curtain composite material

Recommended Composite Structure

ES-VM Plus metallized film laminated with non-woven fabric creates the core material for cellular blinds (honeycomb shades). The honeycomb structure traps air for superior insulation, while the metallized layer provides total blackout and heat reflection. Optional weather protection coating is available for enhanced outdoor durability.

Packaging & Storage

Standard packaging: Roll form, wrapped in PE film, packed in carton box with foam protection. Store in a cool, dry environment (temperature below 35°C, humidity below 75% RH). Avoid direct sunlight. Shelf life: 12 months from date of manufacture under proper storage conditions.

Customization

Available thickness: 6µm – 100µm. Width and length are fully customizable to your production requirements. Contact our sales team for custom specifications, sample requests, or technical consultation.

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This document is for reference only. Actual specifications may vary. Contact us for detailed testing data.