



Tolkabos Farm
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Technical Data Sheet

18mic Metallised PE film with UV

Application: Agricultural greenhouse light supplement, orchard fruit coloring, ground reflection, improving canopy light uniformity

Structure: Virgin PE film with UV masterbatch, single-side vacuum aluminum metallization

Test Condition: 23±2°C, 50±5% RH standard laboratory environment

Item	Specification	Test Standard	Remarks
Nominal Thickness	18 µm	GB/T 6672	Substrate thickness, excluding Alu layer
Thickness Tolerance	±1.5 µm	GB/T 6672	-
Available Width	1000–2200 mm	Customized	Slitting available
Roll Length	1000–4000 m/roll	Customized	-
Density	0.92–0.93 g/cm ³	GB/T 1033.1	PE substrate
Visible Light Reflectivity (400–700nm)	≥85%	GB/T 2986	Aluminum side
Light Transmittance	≤3%	GB/T 2410	-
MD Tensile Strength	≥18 MPa	GB/T 1040.3	Machine Direction
TD Tensile Strength	≥16 MPa	GB/T 1040.3	Transverse Direction
MD Elongation at Break	≥350%	GB/T 1040.3	-
TD Elongation at Break	≥400%	GB/T 1040.3	-

MD Tear Strength	≥ 120 kN/m	GB/T 16578.2	-
TD Tear Strength	≥ 140 kN/m	GB/T 16578.2	-
Puncture Resistance	≥ 2.2 N	GB/T 10004 Appendix B	-
Water Vapor Transmission Rate (WVTR)	8–12 g/(m ² ·24h)	GB/T 37	-
Oxygen Transmission Rate (OTR)	1800–2500 cm ³ /(m ² ·24h·atm)	GB/T 38	-
Sheet Resistance	1.8–2.5 $\Omega/\square$	Four-point probe method	Represent Alu thickness
Al Adhesion Grade	4B	ASTM D3359	No large peeling after tape test
UV Stabilizer System	HALS UV masterbatch internal added	Formulation standard	No surface coating
Xenon Lamp Aging Resistance	≥ 600 h, mechanical retention $\geq 60\%$	GB/T 16422.2	Actual service life depends on field environment
Water Immersion Resistance	No blistering & delamination after 72h	Lab immersion test	-
Weak Acid & Alkali Resistance	No obvious aluminum loss after short contact	Simulated agricultural soil environment	Avoid long-term strong chemical soaking



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Storage & Usage Instructions

- 1. Storage Condition:** Store in cool, dry and dark warehouse. Storage temperature: 5–35°C. Shelf life: 12 months for unopened goods.
- 2. Usage Notice:** Place the bright aluminum side upward for reflection. Avoid sharp object scratching the metallized layer.
- 3. Disclaimer:** All data above represents typical product values, not for contract specification unless formally confirmed. No implicit warranty is given.



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Certificate of Analysis

Product Name: 18mic Metallised PE film with UV

Product Model: AR-PE-AL-18-UV

Inspection Standard: Factory Standard & Corresponding GB/ASTM Test Standard

Inspection Result: Qualified

Inspection Item	Standard Requirement	Test Result	Test Standard	Judgment
Nominal Thickness	18 μ m (Tolerance: $\pm$ 1.5 μ m)	18.0 μ m	GB/T 6672	Qualified
Density	0.92–0.93 g/cm ³	0.925 g/cm ³	GB/T 1033.1	Qualified
Available Width & Length	Customized size, no obvious deviation	In compliance with order requirement	Factory Test	Qualified
Visible Light Reflectivity (400– 700nm)	$\geq$ 85%	87.2%	GB/T 2986	Qualified
Light Transmittance	$\leq$ 3%	2.1%	GB/T 2410	Qualified
MD Tensile Strength	$\geq$ 18 MPa	19.5 MPa	GB/T 1040.3	Qualified
TD Tensile Strength	$\geq$ 16 MPa	17.8 MPa	GB/T 1040.3	Qualified
MD Elongation at Break	$\geq$ 350%	385%	GB/T 1040.3	Qualified
TD Elongation at Break	$\geq$ 400%	426%	GB/T 1040.3	Qualified
TD Tear Strength	$\geq$ 140 kN/m	146 kN/m	GB/T 16578.2	Qualified
Puncture Resistance	$\geq$ 2.2 N	2.5 N	GB/T 10004	Qualified



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			Appendix B	
Water Vapor Transmission Rate	8–12 g/(m ² ·24h)	10.1 g/(m ² ·24h)	GB/T 1037	Qualified
Oxygen Transmission Rate	1800–2500 cm ³ /(m ² ·24h·atm)	2150 cm ³ /(m ² ·24h·at m)	GB/T 1038	Qualified
Sheet Resistance	1.8–2.5 Ω/□	2.1 Ω/□	Four-point probe method	Qualified
Al Adhesion Grade	4B	4B (No peeling)	ASTM D3359	Qualified
Xenon Lamp Aging Test	≥600h, mechanical retention ≥60%	600h, retention 68%	GB/T 16422.2	Qualified
Water Immersion Resistance	No blistering & delamination after 72h	No abnormality	Lab immersion test	Qualified
Weak Acid & Alkali Resistance	No obvious aluminum loss in short contact	No abnormality	Simulated agricultural environment test	Qualified
Surface Condition	Smooth surface, no scratch, no bubble, no missing aluminum coating	In compliance	Visual Inspection	Qualified

General Conclusion

All tested items of this batch of **18μm UV Stabilized Aluminum Coated PE Agricultural Reflective Film** meet the factory technical standards and customer specification requirements. The products are qualified for delivery.