



Thermo Scientific Aegis5-14 film

Five-layer, 14 mil cast film

Thermo Scientific™ BioProcess Containers (BPCs) are built to meet your single-use upstream and downstream bioprocessing needs. Our films are engineered to meet the most demanding requirements of your bioproduction processes.

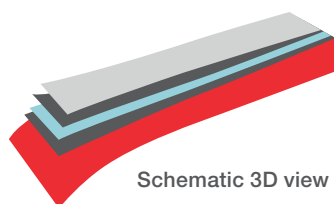
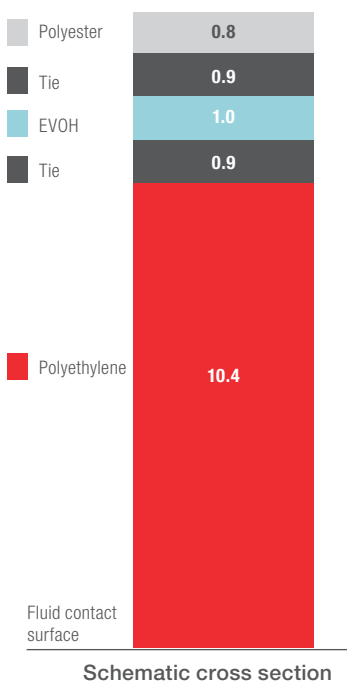
Thermo Scientific™ Aegis™5-14 film is a five-layer, 14 mil cast film produced in a cGMP facility. The outer layer is a polyester elastomer coextruded with an ethyl vinyl alcohol (EVOH) barrier layer and a low-density polyethylene product contact layer.

Key benefits

- Good toughness and puncture resistance
- Non-animal origin formulation
- BPCs available from 50 mL to 2,000 L—one film for your entire bioproduction workflow
- Standard and custom configurations available in 2D pillow-style with seam or panel ports, and 3D square tube-style configurations with top- and bottom-panel porting options supplied gamma irradiated and ready to use

Film specifications

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Property	Test protocol	Average values	
Physical data (post-gamma irradiation, 25–40 kGy)			
Tensile strength	ASTM D882	2392 psi	16.5 MPa
Elongation	ASTM D882	487%	
Yield strength	ASTM D882	1362 psi	9.4 MPa
2% Secant modulus	ASTM D882	43389 psi	299 MPa
Tensile toughness	ASTM D882	243 lbf-in	2.7 kN-cm
Puncture resistance	ASTM F1306	25 lbf	111 N
Seam strength	ASTM F88	31 lbf/in	54 N/cm
O ₂ transmission rate	ASTM D3985, 0% relative humidity (RH) outside, 90% RH inside, 23°C	0.023 cc/100 in ² /day	0.36 cc/m ² /day
CO ₂ transmission rate	Mocon method, 0% RH outside, 100% RH inside, 23°C	0.087 cc/100 in ² /day	1.35 cc/m ² /day
Water vapor transmission rate	ASTM F1249, 0% RH outside, 100% RH inside, 23°C	0.023 g/100 in ² /day	0.35 g/m ² /day
Haze	ASTM D1003 (outside dry/inside dry)	68%	
Glass transition temperature	ASTM E1640	–24°F	–31°C
Film gauge	Internal study	0.014 in.	0.356 mm
Film contact material	NA	Polyethylene	
Temperature range [†]	Internal study	–112°F to 140°F	–80°C to 60°C
10 ^{–6} Sterility assurance level	ANSI/AAMI/ISO 11137:2006	2.5–4 Mrad	25–40 kGy
Biocompatibility data (post-gamma irradiation, >50 kGy)			
USP Class VI	USP <88>	Pass	
Cytotoxicity	USP <87>	Pass	
Bacterial endotoxin	USP <85>	0.005 EU/mL	
Heavy metals	USP <661>	<1 ppm	
Buffering capacity	USP <661>	<1 mL	
Non-volatile residue	USP <661>	<1 mg	
Residue on ignition	USP <661>	<1 mg	
Hemolysis	ISO 10993-4	Nonhemolytic	
Appearance	EP <3.2.2.1>	Pass	
Acidity and alkalinity	EP <3.2.2.1>	Pass	
Absorbance	EP <3.2.2.1>	Pass	
Reducing substances	EP <3.2.2.1>	Pass	
Transparency	EP <3.2.2.1>	Pass	

All tests are run post-gamma irradiation unless otherwise noted. [†] Sub-zero conditions require proper support and handling.

Find out more at thermofisher.com/sut

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