

Tritan™ MP200

Copolyester
Eastman Chemical Company

Message:

Eastman Tritan MP200 is an amorphous copolyester that combines excellent clarity and toughness with outstanding heat and chemical resistance. Film and sheet manufactured from this new-generation copolyester can be thermoformed with a wide processing window that allows for product designs that reflect intricate detail. Eastman Tritan MP200 copolyester is suitable for use with most forms of sterilization including radiation and ethylene oxide. It is NOT suitable for autoclave/steam sterilization. Eastman Tritan MP200 copolyester has been formulated for use in medical film, sheet, and packaging applications.

General Information			
Features	Radiation disinfection		
	Highlight		
	Pressure cooker disinfection		
	Ethylene oxide disinfection		
	Good chemical resistance		
	Heat resistance, high		
	Definition, high		
	Good toughness		
	amorphous		
	Disinfect with steam		
Uses	Packaging		
	Films		
	Sheet		
	Medical packaging		
Agency Ratings	ISO 11607		
	USP 35		
Processing Method	Film extrusion		
	Extrusion		
	Sheet extrusion molding		
	Thermoforming		
Physical	Nominal Value	Unit	Test Method
Density	1.19	g/cm ³	ASTM D1505
Water Absorption (24 hr)	0.50	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Wear resistance (23°C) ¹	20% Haze		ASTM D1044
Carbon Dioxide Permeability (23°C, 254.0 μm)	210	cm ³ ·mm/m ² /atm/24 hr	ASTM D1434

PPT Tear Resistance			ASTM D2582
MD : 23°C, 254.0 µm	40	N	ASTM D2582
TD : 23°C, 254.0 µm	40	N	ASTM D2582
Tear Propagation Resistance			ASTM D1938
MD, Split Tear Method : 23°C, 254.0 µm	310	gf	ASTM D1938
TD, Split Tear Method : 23°C, 254.0 µm	200	gf	ASTM D1938
UV Transmittance ²	89	%	
Surface Energy			ASTM D5946
Dispersive : 23°C	39	dyne/cm	ASTM D5946
Polar : 23°C	8	dyne/cm	ASTM D5946
Total : 23°C	47	dyne/cm	ASTM D5946
Films	Nominal Value	Unit	Test Method
Film Thickness - Tested	250	µm	ASTM D374
Elastic Modulus - MD (250 µm)	1500	MPa	ASTM D882
Elastic Modulus - TD (250 µm)	1400	MPa	ASTM D882
Tensile Strength			ASTM D882
MD: Yield, 250 µm	43.0	MPa	ASTM D882
TD: Yield, 250 µm	41.0	MPa	ASTM D882
MD: Break, 250 µm	57.0	MPa	ASTM D882
TD: Break, 250 µm	42.0	MPa	ASTM D882
Tensile Elongation			ASTM D882
MD: Yield, 250 µm	8.0	%	ASTM D882
TD: Yield, 250 µm	8.0	%	ASTM D882
MD: Break, 250 µm	110	%	ASTM D882
TD: Break, 250 µm	120	%	ASTM D882
Dart Drop Impact ³			ASTM D1709A
-30°C, 250 µm	850	g	ASTM D1709A
-18°C, 250 µm	830	g	ASTM D1709A
23°C, 250 µm	830	g	ASTM D1709A
Elmendorf Tear Strength			ASTM D1922
MD : 250 µm	380	g	ASTM D1922
TD : 250 µm	430	g	ASTM D1922
Trouser Tear Resistance ⁴			ISO 6383-1
MD : 250 µm	10.0	N/mm	ISO 6383-1
TD : 250 µm	9.00	N/mm	ISO 6383-1
Oxygen Permeability (23°C, 250 µm)	44	cm ³ · mm/m ² /atm/24 hr	ASTM D3985
Water Vapor Transmission Rate			ASTM F1249
23°C, 100% RH, 250 µm	4.0	g/m ² /24 hr	ASTM F1249
38°C, 100% RH, 250 µm	10	g/m ² /24 hr	ASTM F1249
Impact	Nominal Value	Unit	Test Method
Instrumented Dart Impact (23°C, 0.254 mm, Total Energy)	4.50	J	ASTM D3763

Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	119	°C	DSC
CLTE - Flow (23°C)	8.0E-5	cm/cm/°C	ASTM D696
Specific Heat			DSC
60°C	1700	J/kg/°C	DSC
100°C	1900	J/kg/°C	DSC
150°C	2300	J/kg/°C	DSC
200°C	2400	J/kg/°C	DSC
250°C	2600	J/kg/°C	DSC
Optical	Nominal Value	Unit	Test Method
Gloss (60°, 254 µm)	158		ASTM D2457
Refractive Index	1.540		ASTM D542
Transmittance (Total, 254 µm)	93.0	%	ASTM D1003
Haze (254 µm)	0.80	%	ASTM D1003
Yellowness Index (0.254 mm)	0.50	YI	ASTM D1925

NOTE

1. 25 cycles
2. UV/Vis Spectro, 380 nm
3. 12.7 mm dia. head, 127 mm dia. clamp, 600 mm drop
4. 200 mm/min

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