

Eastman Tritan MP100 Copolyester

Category : Polymer , Thermoplastic , Polyester, TP , Polyester Film

Material Notes:

Eastman Tritan MP100 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 MP100 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 MP100 has been formulated for use in medical film, sheet, and packaging applications. Application/Uses Device packaging Extruded medical films and sheeting Medical articles from sheet Rigid medical packaging Sterile medical packaging Key Attributes Good toughness Does not contain Bisphenol-A (BPA) Does not contain plasticizers Enduring sustainability Excellent heat resistance Outstanding chemical resistance Reliable, predictable processing for extrusion, thermoforming, heat and radio frequency sealing Suitable for most forms of sterilization Good, long-term clarity Information was provided by Eastman.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Eastman-Tritan-MP100-Copolyester.php

Physical Properties	Metric	English	Comments
Density	1.19 g/cc	0.0430 lb/in ³	ASTM D1505
Water Absorption	0.50 %	0.50 %	ASTM D570
	@Time 86400 sec	@Time 24.0 hour	
Water Vapor Transmission	4.00 g/m ² /day	0.258 g/100 in ² /day	ASTM F1249
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	11.0 g/m ² /day	0.708 g/100 in ² /day	ASTM F1249
	@Temperature 38.0 °C	@Temperature 100 °F	
Oxygen Transmission	32.0 cc-mm/m ² -24hr-atm	81.3 cc-mil/100 in ² -24hr-atm	ASTM D3985
Carbon Dioxide Transmission	149 cc-mm/m ² -24hr-atm	378 cc-mil/100 in ² -24hr-atm	ASTM D1434
Thickness	250 microns	9.84 mil	Thickness of film tested; ASTM D374
Surface Tension	45 dynes/cm	45 dynes/cm	Polar; ASTM D5946

Mechanical Properties	Metric	English	Comments
Film Tensile Strength at Yield, MD	41.0 MPa	5950 psi	ASTM D882
Film Tensile Strength at Yield, TD	40.0 MPa	5800 psi	ASTM D882
Film Elongation at Break, MD	179 %	179 %	ASTM D882

Film Elongation at Break, TD Mechanical Properties	203 % Metric	203 % English	ASTM D882 Comments
Film Elongation at Yield, MD	7.0 %	7.0 %	ASTM D882
Film Elongation at Yield, TD	7.0 %	7.0 %	ASTM D882
Secant Modulus, MD	1.462 GPa	212.0 ksi	ASTM D882
Secant Modulus, TD	1.383 GPa	200.6 ksi	ASTM D882
Puncture Energy	4.60 J @Temperature 23.0 °C	3.39 ft-lb @Temperature 73.4 °F	Dynatup; ASTM D3763
Tear Strength	11.0 kN/m	62.8 pli	MD; Trouser @200/mm/min; ISO 6383-1
	11.0 kN/m	62.8 pli	TD; Trouser @200/mm/min; ISO 6383-1
	12.0 kN/m	68.5 pli	Split tear method, TD; ASTM D1938
	13.0 kN/m	74.2 pli	Split tear method, MD; ASTM D1938
Elmendorf Tear Strength MD	509 g	509 g	ASTM D1922
Elmendorf Tear Strength TD	612 g	612 g	ASTM D1922
Elmendorf Tear Strength, MD	2.00 g/micron	50.8 g/mil	ASTM D1922
Elmendorf Tear Strength, TD	2.40 g/micron	61.0 g/mil	ASTM D1922
Dart Drop	3.47 g/micron @Temperature -18.0 °C	88.1 g/mil @Temperature -0.400 °F	ASTM 1709A
	3.53 g/micron @Temperature 23.0 °C	89.7 g/mil @Temperature 73.4 °F	ASTM 1709A
	3.65 g/micron @Temperature -30.0 °C	92.7 g/mil @Temperature -22.0 °F	ASTM 1709A
Dart Drop Test	867 g @Temperature -18.0 °C	1.91 lb @Temperature -0.400 °F	ASTM 1709A
	882 g @Temperature 23.0 °C	1.94 lb @Temperature 73.4 °F	ASTM 1709A
	913 g @Temperature -30.0 °C	2.01 lb @Temperature -22.0 °F	ASTM 1709A
Film Tensile Strength at Break, MD	59.0 MPa	8560 psi	ASTM D882

Mechanical Properties	Metric	English	Comments
-----------------------	--------	---------	----------

Thermal Properties	Metric	English	Comments
CTE, linear	88.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	48.9 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ASTM D696
Specific Heat Capacity	1.72 J/g- $^{\circ}\text{C}$	0.410 BTU/lb- $^{\circ}\text{F}$	DSC
	@Temperature 60.0 $^{\circ}\text{C}$	@Temperature 140 $^{\circ}\text{F}$	
	1.88 J/g- $^{\circ}\text{C}$	0.450 BTU/lb- $^{\circ}\text{F}$	DSC
	@Temperature 100 $^{\circ}\text{C}$	@Temperature 212 $^{\circ}\text{F}$	
	2.26 J/g- $^{\circ}\text{C}$	0.540 BTU/lb- $^{\circ}\text{F}$	DSC
	@Temperature 150 $^{\circ}\text{C}$	@Temperature 302 $^{\circ}\text{F}$	
	2.43 J/g- $^{\circ}\text{C}$	0.580 BTU/lb- $^{\circ}\text{F}$	DSC
	@Temperature 200 $^{\circ}\text{C}$	@Temperature 392 $^{\circ}\text{F}$	
	2.59 J/g- $^{\circ}\text{C}$	0.620 BTU/lb- $^{\circ}\text{F}$	DSC
	@Temperature 250 $^{\circ}\text{C}$	@Temperature 482 $^{\circ}\text{F}$	
Brittleness Temperature	$\leq -60.0\text{ }^{\circ}\text{C}$	$\leq -76.0\text{ }^{\circ}\text{F}$	ASTM D1790
Glass Transition Temp, Tg	110 $^{\circ}\text{C}$	230 $^{\circ}\text{F}$	DSC

Optical Properties	Metric	English	Comments
Refractive Index	1.545	1.545	ASTM D542
Haze	1.0 %	1.0 %	ASTM D1003
Gloss	161 %	161 %	@ 60 $^{\circ}$; ASTM D2457
Transmission, Visible	92 %	92 %	ASTM D1003
UV Transmittance	89 %	89 %	UV/Vis Spectro
	@Thickness 0.380 mm	@Thickness 0.0150 in	

Descriptive Properties	Value	Comments
PPT Tear Resistance, M.D.	42 N	ASTM D2582
PPT Tear Resistance, T.D.	56 N	ASTM D2582
Taber Abrasion	23% haze	ASTM 1044, Average at 25 cycles

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215, Fengxian District, Shanghai City, China