Tritan™ FX100

Copolyester

Eastman Chemical Company

Message:

Eastman Tritan™ FX100 is an amorphous copolyester that combines excellent clarity and toughness with outstanding heat and chemical resistance. Films manufactured from this new-generation copolyester can be thermoformed without pre-drying and with a wide processing window that allows for product designs that reflect intricate detail. Eastman Tritan™ FX100 copolyester may be used in repeated use food contact articles under United States Food and Drug Administration (FDA) regulations. Eastman Tritan™ FX100 copolyester is certified to NSF/ANSI Standard 51 for Food Equipment Materials.

General Information	
Features	Amorphous
	BPA Free
	Food Contact Acceptable
	Good Chemical Resistance
	Good Toughness
	High Clarity
	High Heat Resistance
Uses	Consumer Applications
	Film
	Safety Equipment
Agency Ratings	FDA Food Contact, Unspecified Rating
	NSF 51

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.19	g/cm³	ASTM D792
Water Absorption (23°C, 24 hr, 0.250 mm)	0.50	%	ASTM D570
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Taber Abrasion Resistance (23°C) [1]	23haze	%	ASTM D1044
Carbon Dioxide Permeability (23°C, 254.0 µm) [2]	150	cm³·mm/m²/atm/24 hr	ASTM D1434
Elmendorf Tear Strength			
MD : 23°C, 250.0 µm	5	N	ASTM D1922
TD : 23°C, 250.0 µm	6	N	
PPT Tear Resistance			ASTM D2582
MD : 23°C, 250.0 µm	42	N	
TD : 23°C, 250.0 µm	56	N	
Tear Propagation Resistance [3]			ASTM D1938
MD : 23°C, 250.0 µm	410	gf	
TD : 23°C, 250.0 µm	310	gf	

UV Transmittance (250.0 µm) [4]	89	%	
Surface Energy			ASTM D5946
Dispersive : 23°C, 250.0 µm	39	dyne/cm	
Polar : 23°C, 250 mm	8	dyne/cm	
Total : 23°C, 250.0 µm	46	dyne/cm	
Films	**Nominal Value**	**Unit**	**Test Method**
Film Thickness - Tested	250	µm	
Film Puncture Energy [5] (250 µm)	4.60	J	ASTM D3763
Secant Modulus			ASTM D882
MD : 250 µm	1500	MPa	
TD : 250 µm	1400	MPa	
Tensile Strength			ASTM D882
MD : Yield,250 µm	41.0	MPa	
TD : Yield,250 µm	40.0	MPa	
MD : Break, 250 µm	59.0	MPa	
TD : Break, 250 µm	52.0	MPa	
Tensile Elongation			ASTM D882
MD : Yield, 250 µm	7.0	%	
TD : Yield, 250 µm	7.0	%	
MD : Break, 250 µm	180	%	
TD : Break	200	%	
Dart Drop Impact [6]			ASTM D1709A
-30°C, 250 µm	910	g	
23°C, 250 µm	880	g	
Trouser Tear Resistance [7]			ISO 6383-1
MD : 250 µm	11.0	N/mm	
TD : 250 µm	11.0	N/mm	
Oxygen Permeability (23°C, 250 µm, 50% RH)	32	$cm^3 \cdot mm/m^2/atm/24\ hr$	ASTM D3985
Water Vapor Transmission Rate			ASTM F1249
23°C, 100% RH, 250 µm	4.0	$g/m^2/24\ hr$	
38°C, 100% RH, 250 µm	11	$g/m^2/24\ hr$	
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tear Strength			ASTM D1938
Split [8]	12	kN/m	
Split [9]	13	kN/m	
Thermal	**Nominal Value**	**Unit**	**Test Method**
Melting Temperature	110	°C	
CLTE - Flow (23°C, 0.250 mm)	9.0E-5	cm/cm/°C	ASTM D696
Specific Heat			DSC
60°C	1700	J/kg/°C	
100°C	1900	J/kg/°C	

150°C	2200	J/kg/°C	
200°C	2400	J/kg/°C	
250°C	2600	J/kg/°C	
Optical	Nominal Value	Unit	Test Method
Gloss (60°, 250 µm)	161		ASTM D2457
Refractive Index	1.550		ASTM D542
Transmittance (250 µm)	92.0	%	ASTM D1003
Haze (250 µm)	0.70	%	ASTM D1003
Yellowness Index (250 mm)	0.50	YI	ASTM D1925
NOTE			
1.	average at 25 cycles		
2.	50% RH		
3.	254 mm/min		
4.	% Transmission at 380 nm		
5.	Dynatup, Total Energy		
6.	12.7 mm dia. head, 127 mm dia. clamp, 600 mm drop		
7.	200 mm/min		
8.	TD, 250 µm		
9.	MD, 250 µm		

Recommended distributors for this material

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