

Tritan™ TX1801 Natural

Copolyester
Eastman Chemical Company

Message:

Eastman Tritan™ Copolyester TX1801 is an amorphous copolyester specifically developed for use in blow molding applications. Eastman Tritan™ Copolyester TX1801 contains a mold release derived from vegetable based sources. Its most outstanding features are excellent toughness, hydrolytic stability, heat resistance, and chemical resistance. In addition, this new generation copolyester offers excellent appearance and clarity. Eastman Tritan™ Copolyester TX1801 may be used in repeated use food contact articles under United States Food and Drug Administration (FDA) regulations.

General Information			
Additive	demoulding		
Features	Radiation disinfection		
	Ethylene oxide disinfection		
	Workability, good		
	Fast molding cycle		
	Good color stability		
	High liquidity		
	Good chemical resistance		
	Heat resistance, high		
	Definition, high		
	Good toughness		
	Hydrolysis stability		
amorphous			
Uses	Medical/nursing supplies		
Agency Ratings	FDA not rated		
	ISO 10993		
	USP Class VI		
Appearance	Natural color		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.18	g/cm³	ASTM D792
Molding Shrinkage - Flow	0.60	%	ASTM D955
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale, 23°C)	110		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
23°C	1610	MPa	ASTM D638
23°C	1570	MPa	ISO 527-2
Tensile Strength			
Yield, 23°C	45.0	MPa	ASTM D638, ISO 527-2

Fracture, 23°C	52.0	MPa	ASTM D638
Fracture, 23°C	51.0	MPa	ISO 527-2
Tensile Elongation			ASTM D638, ISO 527-2
Yield, 23°C	7.0	%	ASTM D638, ISO 527-2
Fracture, 23°C	140	%	ASTM D638, ISO 527-2
Flexural Modulus			
23°C	1520	MPa	ASTM D790
23°C	1490	MPa	ISO 178
Flexural Stress			
23°C	60.0	MPa	ISO 178
Yield, 23°C	64.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C	840	J/m	ASTM D256
-40°C	12	kJ/m ²	ISO 180
23°C	78	kJ/m ²	ISO 180
Unnotched Izod Impact (23°C)	No Break		ASTM D4812
Instrumented Dart Impact			ASTM D3763
-40°C, Energy at Maximum Load	67.0	J	ASTM D3763
0°C, Energy at Maximum Load	65.0	J	ASTM D3763
23°C, Energy at Maximum Load	62.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	101	°C	ASTM D648
1.8 MPa, not annealed	85.0	°C	ASTM D648
Optical	Nominal Value	Unit	Test Method
Transmittance (Total)	91.0	%	ASTM D1003
Haze	< 1.0	%	ASTM D1003
Injection	Nominal Value	Unit	
Drying Temperature	88.0	°C	
Drying Time	4.0 - 6.0	hr	
Injection instructions			
ISBM Melt Temperature: 260 to 280°CISBM Injection Mold Temperature: 40 to 65°CISBM Blow Mold Temperature: 35 to 55°C			
Extrusion	Nominal Value	Unit	
Drying Temperature	88.0	°C	
Drying Time	4.0 - 6.0	hr	
Extrusion instructions			
EBM Melt Temperature: 235 to 255°CCEBM Blow Mold Temperature: 15 to 50°C			

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