

Eastman Eastar AN004 Natural PCTA Copolyester

Category : Polymer , Thermoplastic , Polyester, TP , PCTA Polyester Alloy , Polycyclohexylenedimethylene Terephthalate (PCT)

Material Notes:

EASTAR AN004 Copolyester contains a mold release. It has excellent appearance and is nearly water-clear. Its most outstanding features are its chemical resistance and processing capabilities. Exposure to aromatic oils often causes crazing or actual fracture of many polymer resins, but AN004 maintains its physical properties when exposed to these oils, and its appearance is virtually unchanged. Easy to process, it flows readily and fills intricate molds. Its processability coupled with its outstanding chemical resistance makes it well suited for thick-wall applications. Applications: Floor care; Fragrance packaging; Housewares; Point of purchase displays; Refrigerator interior parts; Toys/Sporting goods; Writing instruments Properties reported here are typical of average lots. Eastman makes no representation that the material in any particular shipment will conform exactly to the values given. Information provided by Eastman Chemical.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Eastman-Eastar-AN004-Natural-PCTA-Copolyester.php

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in ³	ASTM D792 and ISO 1183
Water Absorption	0.13 %	0.13 %	24 hour immersion; ISO 62
Linear Mold Shrinkage, Flow	0.0060 cm/cm @Thickness 3.20 mm	0.0060 in/in @Thickness 0.126 in	ASTM D955

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	117	117	ASTM D785
Tensile Strength, Ultimate	56.0 MPa	8120 psi	ISO 527
Tensile Strength, Yield	56.0 MPa	8120 psi	ISO 527
Elongation at Break	130 %	130 %	ISO 527
Elongation at Yield	5.4 %	5.4 %	ISO 527
Flexural Yield Strength	81.0 MPa	11700 psi	ISO 178
Flexural Modulus	2.10 GPa	305 ksi	ISO 178
Izod Impact, Notched	NB	NB	ASTM D256
	0.750 J/cm @Temperature -40.0 °C	1.41 ft-lb/in @Temperature -40.0 °F	ASTM D256

Thermal Properties	Metric	English	Comments
Specific Heat Capacity	1.38 J/g-°C	0.330 BTU/lb-°F	

Thermal Properties	@Temperature 60.0 °C Metric	@Temperature 140 °F English	Comments
	2.18 J/g-°C	0.521 BTU/lb-°F	
	@Temperature 240 °C	@Temperature 464 °F	
Deflection Temperature at 0.46 MPa (66 psi)	103 °C	217 °F	ASTM D648 and ISO 75
Deflection Temperature at 1.8 MPa (264 psi)	90.0 °C	194 °F	ASTM D648 and ISO 75
Vicat Softening Point	110 °C	230 °F	5 kg load; ISO 306
	118 °C	244 °F	1 kg load; ISO 306
Flammability, UL94	HB	HB	
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	V-2	V-2	natural and white
	@Thickness 3.20 mm	@Thickness 0.126 in	
	V-2	V-2	natural and white
	@Thickness 1.60 mm	@Thickness 0.0630 in	

Optical Properties	Metric	English	Comments
Haze	3.6 %	3.6 %	ASTM D1003
Transmission, Visible	77 %	77 %	Regular transmittance per ASTM D 1003
	81 %	81 %	Total Transmittance; ASTM D 1003

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	ASTM D257
Surface Resistance	1.00e+16 ohm	1.00e+16 ohm	ASTM D257
Dielectric Constant	2.1	2.1	ASTM D 150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
	2.3	2.3	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dielectric Strength	17.3 kV/mm	439 kV/in	Short Time, 500 V/sec rate-of-rise; ASTM D 149
Dissipation Factor	0.0020	0.0020	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
	0.0080	0.0080	

Electrical Properties	Metric @ Frequency 1e+6 Hz	English @ Frequency 1e+6 Hz	ASTM D150 Comments
Comparative Tracking Index	>= 600 V	>= 600 V	ASTM D3638
High Voltage Arc-Tracking Rate, HVTR	38.0 mm/min	1.50 in/min	UL 746A

Processing Properties	Metric	English	Comments
Melt Temperature	280 °C	536 °F	
Mold Temperature	47.5 °C	118 °F	
Drying Temperature	95.0 °C	203 °F	
Dry Time	6 hour	6 hour	

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