

Eastman DuraStar MN621 Polymer, Natural

Category : Polymer , Thermoplastic , Polyester, TP , Polycyclohexylenedimethylene Terephthalate (PCT) , Glycol-Modified PCT (PCTG) Copolyester

Material Notes:

Durastar Polymer MN621 was developed for the medical device industry and contains a mold release It processes easily and requires minimal drying time. It has superior toughness, high clarity and good chemical resistance.Applications/UsesMedical

Order this product through the following link:

http://www.lookpolymers.com/polymer_Eastman-DuraStar-MN621-Polymer-Natural.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D792
Density	1.19 g/cc	0.0430 lb/in ³	ISO 1183
Linear Mold Shrinkage	0.0020 - 0.0060 cm/cm @Thickness 3.20 mm	0.0020 - 0.0060 in/in @Thickness 0.126 in	ASTM D955

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	105	105	ASTM D785
Tensile Strength at Break	49.0 MPa	7110 psi	ISO 527
	53.0 MPa	7690 psi	ASTM D638
Tensile Strength, Yield	46.0 MPa	6670 psi	ASTM D638
	47.0 MPa	6820 psi	ISO 527
Elongation at Break	210 %	210 %	ISO 527
	310 %	310 %	ASTM D638
Elongation at Yield	4.0 %	4.0 %	ISO 527
	5.0 %	5.0 %	ASTM D638
Flexural Strength	64.0 MPa	9280 psi	ISO 178
Flexural Yield Strength	67.0 MPa	9720 psi	ASTM D790
Flexural Modulus	1.75 GPa	254 ksi	ISO 178
	1.90 GPa	276 ksi	ASTM D790
Izod Impact, Notched	0.600 J/cm	1.12 ft-lb/in	ASTM D256
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	3.70 J/cm	6.93 ft-lb/in	

Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	ASTM D256 Comments
Izod Impact, Unnotched	NB	NB	ASTM D4812
	NB @Temperature -40.0 °C	NB @Temperature -40.0 °F	ASTM D4812
Izod Impact, Notched (ISO)	6.30 kJ/m ² @Temperature -40.0 °C	3.00 ft-lb/in ² @Temperature -40.0 °F	ISO 180
	29.6 kJ/m ² @Temperature 23.0 °C	14.1 ft-lb/in ² @Temperature 73.4 °F	ISO 180
Puncture Energy	45.0 J	33.2 ft-lb	Puncture Resistance @Max Load, 23°C; ASTM D3763
	71.0 J	52.4 ft-lb	Puncture Resistance @ max load, 23°C; ISO 6603-2
	48.0 J @Temperature -40.0 °C	35.4 ft-lb @Temperature -40.0 °F	Puncture Resistance at Max Load; ASTM D3763
	55.0 J @Temperature -40.0 °C	40.6 ft-lb @Temperature -40.0 °F	Puncture Resistance at Max Load; ISO 6603-2

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	73.0 °C	163 °F	ISO 75
	73.0 °C	163 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	65.0 °C	149 °F	ISO 75
	65.0 °C	149 °F	ASTM D648

Optical Properties	Metric	English	Comments
Haze	0.30 %	0.30 %	ASTM D1003
Transmission, Visible	89 %	89 %	Regular Transmittance; ASTM D1003
	91 %	91 %	Total Transmittance; ASTM D1003

Processing Properties	Metric	English	Comments
Melt Temperature	250 - 290 °C	482 - 554 °F	
Mold Temperature	15.0 - 30.0 °C	59.0 - 86.0 °F	

Drying Temperature Processing Properties	70.0 °C Metric	158 °F English	Comments
Dry Time	3 hour	3 hour	

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