

Eastman DuraStar DS1910HF Polymer, Natural

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

Material Notes:

Durastar DS1910HF polymer is a high flow grade of Durastar that contains a mold release. Durastar DS1910HF flow lengths are increased 20-40% relative to Durastar DS1010 as shown by spiral flow testing. Other outstanding features of Durastar are easily maintained such as excellent appearance and clarity, good physical properties, chemical resistance, and easy processing. This high flow product is especially suited for those applications utilizing thin-walled intricate tools. Under existing United States Food and Drug Administration (FDA) regulations, Durastar DS1910HF may be used in food contact articles which comply with the specifications and conditions of use in 21 CFR 177.1240. This product is certified to ANSI/NSF Standard 51. Applications/Uses Appliances Furniture/Furniture trim Toys/Sporting goods Floor care Housewares Point of purchase displays Pen/stationary supplies Key Attributes Good chemical resistance Excellent flow Outstanding impact resistance Excellent clarity Fast drying times Quick cycle times

Order this product through the following link:

http://www.lookpolymers.com/polymer_Eastman-DuraStar-DS1910HF-Polymer-Natural.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.19 g/cc	1.19 g/cc	ASTM D792
Water Absorption	0.15 %	0.15 %	24h Immersion; ASTM D570
Linear Mold Shrinkage	0.0030 cm/cm	0.0030 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	107	107	ASTM D785
Tensile Strength at Break	43.0 MPa	6240 psi	ASTM D638
Tensile Strength, Yield	50.0 MPa	7250 psi	ASTM D638
Elongation at Break	270 %	270 %	ASTM D638
Elongation at Yield	5.0 %	5.0 %	ASTM D638
Flexural Yield Strength	68.0 MPa	9860 psi	ASTM D790
Flexural Modulus	1.90 GPa	276 ksi	ASTM D790
Izod Impact, Notched	0.440 J/cm @Temperature -40.0 °C	0.824 ft-lb/in @Temperature -40.0 °F	ASTM D256
	0.800 J/cm @Temperature 23.0 °C	1.50 ft-lb/in @Temperature 73.4 °F	ASTM D256
Izod Impact, Unnotched	NB	NB	ASTM D4812

Mechanical Properties	Metric	English	Comments
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Puncture Energy	40.0 J	29.5 ft-lb	Puncture Resistance @Max Load, 23°C; ASTM D3763
	38.0 J	28.0 ft-lb	Puncture Resistance at Max Load; ASTM D3763
	@Temperature -40.0 °C	@Temperature -40.0 °F	

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	73.0 °C	163 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	66.0 °C	151 °F	ASTM D648
Vicat Softening Point	86.0 °C	187 °F	1kg load; ASTM D1525

Optical Properties	Metric	English	Comments
Haze	<= 1.0 %	<= 1.0 %	ASTM D1003
Transmission, Visible	92 %	92 %	Total Transmittance; ASTM D1003

Processing Properties	Metric	English	Comments
Melt Temperature	230 - 280 °C	446 - 536 °F	
Mold Temperature	15.0 - 30.0 °C	59.0 - 86.0 °F	
Drying Temperature	70.0 °C	158 °F	
Dry Time	4 hour	4 hour	

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