

Eastman DURASTAR DS1010 Natural PCTA Copolyester

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

Material Notes:

DURASTAR DS1010 polymer contains a mold release. It has excellent appearance and clarity. Its most outstanding features are chemical resistance and excellent processing characteristics. Exposure to aromatic oils often causes crazing or actual fracture of many polymer resins, but DS1010 maintains its physical properties when exposed to these oils, and its appearance is virtually unchanged. Easy to process, it flows readily, fills intricate molds, and is well suited for thick-wall applications. Under existing United States Food and Drug Administration (FDA) regulations, DURASTAR DS1010 may be used in food contact articles which comply with the specifications and conditions of use in 21 CFR 177.1240.Applications: Appliances; Furniture/Furniture trim; Point of purchase displays; Toys/Sporting goodsProperties 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-DURASTAR-DS1010-Natural-PCTA-Copolyester.php

Physical Properties	Metric	English	Comments	
Density	1.20 g/cc	0.0434 lb/in ³	ASTM D792	
Linear Mold Shrinkage, Flow	0.0040 cm/cm	0.0040 in/in	ASTM D955	
	@Thickness 3.20 mm	@Thickness 0.126 in	A31W D333	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	103	103	ASTM D785
Tensile Strength, Ultimate	46.0 MPa	6670 psi	ISO 527
	51.0 MPa	7400 psi	ASTM D638
Tensile Strength, Yield	47.0 MPa	6820 psi	ASTM D638 and ISO 527
Elongation at Break	200 %	200 %	ISO 527
Elongation at Yield	4.0 %	4.0 %	ISO 527
Tensile Modulus	1.80 GPa	261 ksi	ISO 527
Flexural Yield Strength	65.0 MPa	9430 psi	ISO 178
	69.0 MPa	10000 psi	ASTM D790
Flexural Modulus	1.85 GPa	268 ksi	ISO 178
Izod Impact, Notched	0.800 J/cm	1.50 ft-lb/in	ASTM D256
	0.400 J/cm	0.749 ft-lb/in	ASTM D256
	@Temperature -40.0 °C	@Temperature -40.0 °F	AG I III D 200



Mechanical Properties Thermal Properties	Metric Metric	English English	Comments Comments
Deflection Temperature at 0.46 MPa (66 psi)	73.0 °C	163 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	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 per ASTM D 1003
	91 %	91 %	Total Transmittance; ASTM D 1003

Processing Properties	Metric	English	Comments	
Melt Temperature	255 °C	491 °F		
Mold Temperature	22.5 °C	72.5 °F		
Drying Temperature	70.0 °C	158 °F		

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