

Lubrizol Advanced Materials Pearlthane® ECO D12T90E Thermoplastic Polyurethane

Category : Polymer , Renewable/Recycled Polymer , Thermoplastic , Polyurethane, TP

Material Notes:

PEARLTHANE® ECO D12T90E is a 91 Shore A, High Performance natural TPU based on Renewable Sources with ca. 37% renewable content according to ASTM D6866 for Extrusion and Blow moulding applications. This natural TPU resin features properties similar to standard TPU of same hardness (i.e. excellent mechanical properties and abrasion resistance) Applications: PEARLTHANE® ECO D12T90E enhances the performance of a wide range of end use products that ranges from automotive, consumer electronics and sport and leisure applications among others where environmentally-friendly materials can bring value to the end product.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Lubrizol-Advanced-Materials-Pearlthane-ECO-D12T90E-Thermoplastic-Polyurethane.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.11 g/cc	1.11 g/cc	ISO 2781
Moisture Absorption at Equilibrium	<= 0.10 %	<= 0.10 %	MQSA 44
Melt Flow	10 g/10 min @Load 21.6 kg, Temperature 190 - 200 °C	10 g/10 min @Load 47.6 lb, Temperature 374 - 392 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	91	91	ISO 868
Tensile Strength	37.99 MPa	5510 psi	ISO 527
Tensile Strength, Yield	9.03 MPa @Strain 100 %	1310 psi @Strain 100 %	ISO 527
	27.03 MPa @Strain 300 %	3920 psi @Strain 300 %	ISO 527
Elongation at Break	420 %	420 %	ISO 527
Tear Strength	119 kN/m	679 pli	Die C; ISO 34-1B
Abrasion	3.0	3.0	mm ³ Loss; ISO 4649

Thermal Properties	Metric	English	Comments
Melting Point	190 - 200 °C	374 - 392 °F	Temperature range at which MFI = 10 g/10 min at 21.6 kg.; MQSA 111
Glass Transition Temp, Tg	-40.6 °C	-41.0 °F	DSC, 50 °F/min; DIN 51.007

Processing Properties	Metric	English	Comments
Zone 1	200 - 210 Â°C	392 - 410 Â°F	
Zone 2	210 - 220 Â°C	410 - 428 Â°F	
Zone 3	220 - 230 Â°C	428 - 446 Â°F	
Zone 4	210 - 220 Â°C	410 - 428 Â°F	
Die Temperature	200 - 210 Â°C	392 - 410 Â°F	
Screw Speed	50 rpm	50 rpm	

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