

Pearlthane® 11T60D

Thermoplastic Polyurethane Elastomer (Polycaprolactone)

Lubrizol Advanced Materials, Inc.

Message:

Pearlthane® 11T60D is a polycaprolactone copolyester based TPU, supplied in form of translucent, colourless pellets, combining very high hardness with excellent mechanical properties. It is especially advisable for use in producing technical parts by injection moulding.

Pearlthane® 11T60D is especially adequate for the production of shoe heels and top - pieces, rollers, ear-tags, and a variety of injection-moulded components.

General Information			
Features	High hardness		
Uses	Engineering accessories		
	Engineering application		
	Roller		
	Molded Ear Label		
	Footwear		
Agency Ratings	EC 1907/2006 (REACH)		
Appearance	Translucent		
	Colorless		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.19	g/cm ³	ASTM D792
20°C	1.19	g/cm ³	ISO 2781
Moisture Content		%	Internal method
Abrasion Loss	25.0	mm ³	ISO 4649
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	58		ASTM D2240, ISO 868
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412, ISO 527
100% strain	15.0	MPa	ASTM D412, ISO 527
300% strain	28.0	MPa	ASTM D412, ISO 527
Tensile Strength (Yield)	40.0	MPa	ASTM D412, ISO 527
Tensile Elongation (Break)	480	%	ASTM D412, ISO 527
Tear Strength			
-- ¹	170	kN/m	ASTM D624
--	170	kN/m	ISO 34-1
Compression Set (23°C, 70 hr)	35	%	ASTM D395B

Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature ²	-24.0	°C	ISO 11357-2
Melting Temperature ³	202 - 212	°C	Internal method
Injection	Nominal Value	Unit	
Drying Temperature	100 - 110	°C	
Drying Time	1.0 - 2.0	hr	
Rear Temperature	210	°C	
Middle Temperature	215	°C	
Front Temperature	225	°C	
Nozzle Temperature	220	°C	
Mold Temperature	35.0	°C	
Screw L/D Ratio	23.0:1.0		
Injection instructions			
Closing force: : 30 tonsScrew diameter: : 30 mmMaximum hydraulic pressure: : 210 barMould: : Plaque 120x120x2 mm			
NOTE			
1.	C mould		
2.	10°C /min		
3.	Temperature at which MFI = 10 g/10 min @ 21.6 kg		

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