

Pearlthane® 11T85E

Thermoplastic Polyurethane Elastomer (Polycaprolactone)

Lubrizol Advanced Materials, Inc.

Message:

PEARLTHANE 11T85E is a polycaprolactone-copolyester based TPU, supplied in form of translucent, colourless pellets, combining hardness with excellent mechanical properties. It is recommended for extrusion applications.
PEARLTHANE 11T85E when extruded, is used for making films, cables, tubing, profiles, etc.

General Information			
Features	High elasticity		
	Medium hardness		
Uses	Films		
	Cable sheath		
	Pipe fittings		
	Profile		
Agency Ratings	EC 1907/2006 (REACH)		
Appearance	Translucent		
	Colorless		
Forms	Particle		
Processing Method	Extrusion		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.16	g/cm ³	ASTM D792
20°C	1.16	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 A)	86		ASTM D2240, ISO 868
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412, ISO 527
100% strain	6.00	MPa	ASTM D412, ISO 527
300% strain	11.0	MPa	ASTM D412, ISO 527
Tensile Strength (Yield)	35.0	MPa	ASTM D412, ISO 527
Tensile Elongation (Break)	650	%	ASTM D412, ISO 527
Tear Strength			
-- ¹	90.0	kN/m	ASTM D624
--	90	kN/m	ISO 34-1
Thermal	Nominal Value	Unit	Test Method

Glass Transition Temperature ²	-41.0	°C	ISO 11357-2
Melting Temperature ³	179 - 189	°C	Internal method
Extrusion	Nominal Value	Unit	
Drying Temperature	100 - 110	°C	
Drying Time	1.0 - 2.0	hr	
Cylinder Zone 1 Temp.	175 - 195	°C	
Cylinder Zone 2 Temp.	185 - 205	°C	
Cylinder Zone 3 Temp.	195 - 215	°C	
Cylinder Zone 4 Temp.	200 - 220	°C	
Die Temperature	190 - 210	°C	
Extrusion instructions			
Extruder Speed: 20 to 50 rpm			
NOTE			
1.	C mould		
2.	10°C /min		
3.	Temperature at which MFI = 10 g/10 min @ 21.6 kg		

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