

Pearlthane® 16N95UV

Thermoplastic Polyurethane Elastomer (Polyether)

Lubrizol Advanced Materials, Inc.

Message:

PEARLTHANE® 16N95UV is a polyether-based TPU, containing an anti-UV additive, supplied in form of translucent, colorless pellets, combining hardness with excellent mechanical properties and excellent hydrolysis and microbial resistance. It can be both extruded and injection-molded. PEARLTHANE® 16N95UV when extruded, can be used for making (pneumatic) tubes, profiles and cables. When processed by injection molding, can be used for technical parts.

General Information	
Additive	UV stabilizer
Features	Antimicrobial
	Good UV resistance
	Hydrolysis resistance
Uses	Cable sheath
	Engineering accessories
	Pipe fittings
	Profile
Agency Ratings	EC 1907/2006 (REACH)
Appearance	Translucent
	Colorless
Forms	Particle
Processing Method	Extrusion
	Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.17	g/cm ³	ASTM D792
20°C	1.17	g/cm ³	ISO 2781
Moisture Content		%	Internal method
Abrasion Loss	40.0	mm ³	ISO 4649
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A)	94		ASTM D2240, ISO 868
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412, ISO 527
100% strain	11.0	MPa	ASTM D412, ISO 527
300% strain	16.0	MPa	ASTM D412, ISO 527
Tensile Strength (Yield)	40.0	MPa	ASTM D412, ISO 527

Tensile Elongation (Break)	580	%	ASTM D412, ISO 527
Tear Strength			
-- ¹	130	kN/m	ASTM D624
--	130	kN/m	ISO 34-1
Compression Set			ASTM D395B
23°C, 70 hr	30	%	ASTM D395B
70°C, 24 hr	44	%	ASTM D395B
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature ²	-31.0	°C	ISO 11357-2
Melting Temperature ³	178 - 188	°C	Internal method
Injection	Nominal Value	Unit	
Drying Temperature	100 - 110	°C	
Drying Time	1.0 - 2.0	hr	
Rear Temperature	200	°C	
Middle Temperature	210	°C	
Front Temperature	215	°C	
Nozzle Temperature	210	°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			
Extrusion	Nominal Value	Unit	
Drying Temperature	100 - 110	°C	
Drying Time	1.0 - 2.0	hr	
Cylinder Zone 1 Temp.	180 - 195	°C	
Cylinder Zone 2 Temp.	190 - 210	°C	
Cylinder Zone 3 Temp.	200 - 220	°C	
Cylinder Zone 4 Temp.	190 - 210	°C	
Die Temperature	185 - 195	°C	
Extrusion instructions			
L/D Ratio: 25:1 to 30:1Compression Ratio: 2:1 to 3:1Screw Speed 12 to 60 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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