

Texin® 987U

Thermoplastic Polyurethane Elastomer (Polyether)

Covestro - PUR

Message:

Texin 987U resin is an aromatic polyether-based thermoplastic polyurethane; it can be processed by injection molding, extrusion or blow molding.

General Information			
Additive	heat stabilizer		
	UV stabilizer		
Features	Impact resistance, good		
	Good flexibility		
	Good wear resistance		
	Thermal Stability		
	Good toughness		
	Hydrolysis stability		
	Medium transparency		
Uses	Films		
	Wheels		
	Cable sheath		
	Washer		
	Industrial application		
	Pipe		
	Pipe fittings		
	Seals		
	Footwear		
	Profile		
Agency Ratings	NSF 61		
Processing Method	Blow molding		
	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.12	g/cm³	ASTM D792, ISO 1183
Molding Shrinkage			
Flow: 2.54mm	0.80	%	ASTM D955
Transverse flow: 2.54mm	0.80	%	ASTM D955
Vertical flow direction: 2.54mm	0.80	%	ISO 2577

Flow direction: 2.54mm	0.80	%	ISO 2577
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240, ISO 868
Shaw A	87		ASTM D2240, ISO 868
Shaw D	36		ASTM D2240, ISO 868
Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus			ASTM D790, ISO 178
-30°C	93.1	MPa	ASTM D790, ISO 178
23°C	34.5	MPa	ASTM D790, ISO 178
Taber Abrasion Resistance			
1000 Cycles, 1000g, H-18 wheel	25.0	mg	ISO 4649
1000 Cycles, 1000g, H-18 wheel	25.0	mg	ASTM D1044
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412, ISO 37
100% strain	6.20	MPa	ASTM D412, ISO 37
300% strain	11.7	MPa	ASTM D412, ISO 37
Tensile Strength			
Yield	41.4	MPa	ASTM D412
Yield	41.1	MPa	ISO 37
Tensile Elongation (Break)	540	%	ASTM D412, ISO 37
Tear Strength			
-- ¹	87.7	kN/m	ASTM D624
--	88	kN/m	ISO 34-1
Compression Set ²			ASTM D395B, ISO 815
23°C, 22 hr	13	%	ASTM D395B, ISO 815
70°C, 22 hr	37	%	ASTM D395B, ISO 815
Bayshore Resilience	32	%	ASTM D2632
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-40.0	°C	DMA
Vicat Softening Temperature	91.0	°C	ISO 306/A50, ASTM D1525 ³
Injection	Nominal Value	Unit	
Drying Temperature - Desiccant Dryer	93.0 - 104	°C	
Suggested Max Moisture	< 0.030	%	
Suggested Max Regrind	20	%	
Rear Temperature	180 - 200	°C	
Middle Temperature	180 - 205	°C	
Front Temperature	180 - 210	°C	
Nozzle Temperature	185 - 215	°C	
Processing (Melt) Temp	190 - 210	°C	
Mold Temperature	15.0 - 45.0	°C	
Injection Pressure	41.4 - 96.5	MPa	

Injection Rate	Moderate	
Back Pressure	< 1.38	MPa
Screw Speed	40 - 80	rpm
Cushion	< 3.18	mm

Injection instructions

Hold Pressure: 60 to 80% of Injection Pressure

Extrusion	Nominal Value	Unit
Drying Temperature	93.0 - 104	°C
Cylinder Zone 1 Temp.	182 - 199	°C
Cylinder Zone 2 Temp.	185 - 210	°C
Cylinder Zone 3 Temp.	185 - 215	°C
Melt Temperature	195 - 210	°C
Die Temperature	190 - 215	°C

NOTE

1. C mould
2. Post-cured 16 hr at 230°F
3. 速率 A (50°C/h), 压力1 (10N)

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