

Texin® RxT50D

Thermoplastic Polyurethane Elastomer (Polyether)

Covestro - PUR

Message:

Texin RxT50D resin is an aromatic polyether-based thermoplastic polyurethane. It can be processed by injection molding, extrusion or blow molding.

General Information			
Features	Radiation disinfection		
	Ethylene oxide disinfection		
	Impact resistance, good		
	Good flexibility		
	Good wear resistance		
	thermal disinfection		
	Good toughness		
Uses	Films		
	Washer		
	Pipe fittings		
	Connector		
	Seals		
	Profile		
	Medical/nursing supplies		
Agency Ratings	ISO 10993-Part I		
Processing Method	Blow molding		
	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.15	g/cm³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (200°C/8.7 kg)	5.0	g/10 min	ASTM D1238, ISO 1133
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 (Shore D)	50		ASTM D2240, ISO 868
Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus (23°C)	114	MPa	ASTM D790, ISO 178

Taber Abrasion Resistance			
1000 Cycles, 1000g, H-18 wheel	75.0	mg	ISO 4649
1000 Cycles, 1000g, H-18 wheel	75.0	mg	ASTM D1044
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412, ISO 37
100% strain	14.5	MPa	ASTM D412, ISO 37
300% strain	27.6	MPa	ASTM D412, ISO 37
Tensile Strength (Yield)	49.0	MPa	ASTM D412, ISO 37
Tensile Elongation (Break)	480	%	ASTM D412, ISO 37
Tear Strength			
-- ¹	131	kN/m	ASTM D624
--	130	kN/m	ISO 34-1
Compression Set ²			ASTM D395B, ISO 815
23°C, 22 hr	15	%	ASTM D395B, ISO 815
70°C, 22 hr	40	%	ASTM D395B, ISO 815
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	128	°C	ISO 306/50, ASTM D1525 ³
Optical	Nominal Value	Unit	Test Method
Yellowness Index			
--	< 10	YI	DIN 6167
--	< 10	YI	ASTM E313
Injection	Nominal Value	Unit	
Drying Temperature - Desiccant Dryer	93.0 - 104	°C	
Drying Time - Desiccant Dryer	2.0	hr	
Suggested Max Moisture	< 0.030	%	
Rear Temperature	196 - 207	°C	
Middle Temperature	199 - 210	°C	
Front Temperature	199 - 210	°C	
Nozzle Temperature	202 - 213	°C	
Processing (Melt) Temp	202 - 213	°C	
Mold Temperature	16.0 - 38.0	°C	
Injection Pressure	41.4 - 103	MPa	
Injection Rate	Moderate		
Back Pressure	< 5.52	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	
Drying Time	2.0	hr	
Cylinder Zone 1 Temp.	182 - 196	°C	

Cylinder Zone 2 Temp.	193 - 207	°C
Cylinder Zone 3 Temp.	193 - 207	°C
Melt Temperature	199 - 213	°C
Die Temperature	193 - 213	°C

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

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