

Texin® RxS285

Thermoplastic Polyurethane Elastomer (Polyester)

Covestro - PUR

Message:

Texin RxS285 resin is an aromatic polyester-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	Pipe fittings		
	Dental application field		
	Medical/nursing supplies		
Agency Ratings	ISO 10993-Part I		
Processing Method	Blow molding		
	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/8.7 kg)	4.0	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 A)	85		ASTM D2240, ISO 868
Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus (23°C)	27.6	MPa	ASTM D790, ISO 178
Taber Abrasion Resistance			
1000 Cycles, 1000g, H-18 wheel	35.0	mg	ISO 4649
1000 Cycles, 1000g, H-18 wheel	35.0	mg	ASTM D1044
Elastomers	Nominal Value	Unit	Test Method

Tensile Stress			ASTM D412, ISO 37
100% strain	5.34	MPa	ASTM D412, ISO 37
300% strain	13.1	MPa	ASTM D412, ISO 37
Tensile Strength (Yield)	37.9	MPa	ASTM D412, ISO 37
Tensile Elongation (Break)	500	%	ASTM D412, ISO 37
Tear Strength			
-- ¹	87.6	kN/m	ASTM D624
--	88	kN/m	ISO 34-1
Compression Set ²			ASTM D395B, ISO 815
23°C, 22 hr	12	%	ASTM D395B, ISO 815
70°C, 22 hr	35	%	ASTM D395B, ISO 815
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	91.0	°C	ISO 306/50, ASTM D1525 ³
Optical	Nominal Value	Unit	Test Method
Yellowness Index			
--	< 15	YI	DIN 6167
--	< 15	YI	ASTM E313
Injection	Nominal Value	Unit	
Drying Temperature - Desiccant Dryer	82.0 - 99.0	°C	
Drying Time - Desiccant Dryer	2.0	hr	
Suggested Max Moisture	< 0.030	%	
Rear Temperature	182 - 199	°C	
Middle Temperature	182 - 204	°C	
Front Temperature	182 - 210	°C	
Nozzle Temperature	188 - 213	°C	
Processing (Melt) Temp	196 - 207	°C	
Mold Temperature	16.0 - 43.0	°C	
Injection Pressure	41.4 - 103	MPa	
Injection Rate	Slow-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	82.0 - 99.0	°C	
Drying Time	2.0	hr	
Cylinder Zone 1 Temp.	182 - 199	°C	
Cylinder Zone 2 Temp.	182 - 204	°C	
Cylinder Zone 3 Temp.	182 - 210	°C	
Melt Temperature	375 - 400	°C	
Die Temperature	188 - 210	°C	

NOTE

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

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