

Texin® 250

Thermoplastic Polyurethane Elastomer (Polyester)

Covestro - PUR

Message:

Texin 250 resin is an aromatic polyester-based thermoplastic polyurethane with a Shore hardness of approximately 50D. It is processed primarily by extrusion and blow molding but can also be used for injection molding.

General Information			
Features	Low speed solidification crystal point		
	Solvent resistance		
	Good wear resistance		
	Good chemical resistance		
	Oil resistance		
	Medium transparency		
Uses	Films		
	Pipe		
	Pipe fittings		
	Sheet		
	Footwear		
	Profile		
Agency Ratings	FDA 21 CFR 177.1680		
	FDA 21 CFR 177.2600		
Appearance	Natural color		
Processing Method	Blow molding		
	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.22	g/cm ³	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	95		ASTM D2240, ISO 868

Shaw D	50		ASTM D2240, ISO 868
Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus			ASTM D790, ISO 178
23°C	83.0	MPa	ASTM D790, ISO 178
70°C	36.0	MPa	ASTM D790, ISO 178
Taber Abrasion Resistance			
1000 Cycles, 1000g, H-18 wheel	70.0	mg	ISO 4649
1000 Cycles, 1000g, H-18 wheel	70.0	mg	ASTM D1044
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412, ISO 37
100% strain	11.7	MPa	ASTM D412, ISO 37
300% strain	31.7	MPa	ASTM D412, ISO 37
Tensile Strength (Yield)	46.2	MPa	ASTM D412, ISO 37
Tensile Elongation (Break)	400	%	ASTM D412, ISO 37
Tear Strength			
-- ¹	136	kN/m	ASTM D624
--	140	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	35	%	ASTM D395B, ISO 815
Bayshore Resilience	25	%	ASTM D2632
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-20.0	°C	DMA
Vicat Softening Temperature	115	°C	ISO 306/A50, ASTM D1525 ³
Injection	Nominal Value	Unit	
Drying Temperature - Desiccant Dryer	93.0 - 104	°C	
Drying Time - Desiccant Dryer	2.0	hr	
Suggested Max Moisture	0.030	%	
Suggested Max Regrind	20	%	
Rear Temperature	190 - 210	°C	
Middle Temperature	190 - 215	°C	
Front Temperature	200 - 220	°C	
Nozzle Temperature	205 - 225	°C	
Processing (Melt) Temp	205 - 215	°C	
Mold Temperature	15.0 - 40.0	°C	
Injection Pressure	41.4 - 103	MPa	
Injection Rate	Slow-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
Drying Time	2.0	hr
Cylinder Zone 1 Temp.	180 - 200	°C
Cylinder Zone 3 Temp.	180 - 205	°C
Cylinder Zone 5 Temp.	180 - 210	°C
Melt Temperature	190 - 205	°C
Die Temperature	185 - 210	°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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