Texin® STX

Polyurethane

Covestro - PUR

Message:

Texin STX resin is an opaque, high performance thermoplastic polyurethane which possesses the stiffness and modulus of standard engineering thermoplastics.

General Information	
Features	Low CLTE
	Low hygroscopicity
	Impact resistance, good
	Good wear resistance
	Good chemical resistance
	Heat resistance, high
	Low shrinkage
Uses	Electrical/Electronic Applications
	Valve/valve components
	Frame
	Accessories
	Shell
Appearance	Opacity
Processing Method	Extrusion
	Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.22	g/cm³	ASTM D792, ISO 1183
Molding Shrinkage			
Flow: 2.54mm	0.50	%	ASTM D955
Flow direction: 2.54mm	0.50	%	ISO 2577
Water Absorption			
24 hr	0.23	%	ASTM D570
23°C, 24 hr	0.23	%	ISO 62
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness			
Class m	50		ASTM D785
Class r	110		ASTM D785
M scale	50		ISO 2039-2
R scale	110		ISO 2039-2

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1930	MPa	ASTM D638
Tensile Strength			ASTM D638
Yield	62.0	MPa	ASTM D638
Fracture	47.0	MPa	ASTM D638
Tensile Elongation			ASTM D638
Yield	7.3	%	ASTM D638
Fracture	85	%	ASTM D638
Flexural Modulus			ASTM D790, ISO 178
--	2000	MPa	ASTM D790, ISO 178
-- [1]	83.0	MPa	ASTM D790, ISO 178
Flexural Strength	93.0	MPa	ASTM D790, ISO 178
Bending strain-at Maximum Stress			
--	6.8	%	ISO 178
--	6.8	%	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact			ASTM D256
-30°C, 3.18 mm	190	J/m	ASTM D256
23°C, 3.18 mm	850	J/m	ASTM D256
Unnotched Izod Impact (23°C, 3.18 mm)	No Break		ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	88.0	°C	ASTM D648
1.8 MPa, not annealed	73.0	°C	ASTM D648
Vicat Softening Temperature	105	°C	ISO 306/A50, ASTM D1525 [2]
CLTE - Flow	7.5E-5	cm/cm/°C	ASTM D696
Injection	**Nominal Value**	**Unit**	
Drying Temperature - Desiccant Dryer	104 - 121	°C	
Drying Time - Desiccant Dryer	4.0	hr	
Suggested Max Moisture	< 0.030	%	
Suggested Max Regrind	20	%	
Rear Temperature	235 - 246	°C	
Middle Temperature	238 - 249	°C	
Front Temperature	238 - 249	°C	
Nozzle Temperature	243 - 254	°C	
Processing (Melt) Temp	235 - 250	°C	
Mold Temperature	43.0 - 66.0	°C	
Injection Pressure	41.4 - 96.5	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	104 - 121	°C
Drying Time	4.0	hr
Cylinder Zone 1 Temp.	225 - 250	°C
Cylinder Zone 2 Temp.	225 - 240	°C
Cylinder Zone 3 Temp.	225 - 240	°C
Melt Temperature	230	°C
Die Temperature	230 - 240	°C
NOTE		
1.	at 5% Strain	
2.	速率 A (50°C/h), 压 力1 (10N)	

Recommended distributors for this material

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