



Texin 970 U

Polyether-based TPU grades / Shore hardness D 45 - 70

Aromatic polyether-based thermoplastic polyurethane with a Shore D hardness of approximately 70 for injection molding or extrusion.

ISO Shortname

Property	Test Condition	Unit	Standard	Value
Rheological properties				
Mold shrinkage, flow/cross to flow	Value range based on general practical experience	in/in	ASTM D 955	0.008
Mechanical properties (23 °C/50 % r.h.)				
Flexural modulus	73 °F	lb/in ²	ASTM D 790	78000
Flexural modulus	158 °F	lb/in ²	ASTM D 790	17000
Flexural modulus	-22 °F	lb/in ²	ASTM D 790	293000
Tensile strength		lb/in ²	ASTM D 412	5500
Ultimate elongation		%	ASTM D 412	250
Tensile stress at 50 % elongation		lb/in ²	ASTM D 412	3000
Tensile stress at 100 % elongation		lb/in ²	ASTM D 412	3200
Tensile stress at 300 % elongation		lb/in ²	ASTM D 412	5400
Compression set, as molded	22 h at 73 °F	%	ASTM D 395-B	40
Compression set, as molded	22 h at 158 °F	%	ASTM D 395-B	75
Compression set, as molded	22 h at 212 °F	%	ASTM D 395-B	90
Compression set, post-cured	22 h at 73 °F; post-cured 16 h at 230 °F	%	ASTM D 395-B	25
Compression set, post-cured	22 h at 158 °F; post-cured 16 h at 230 °F	%	ASTM D 395-B	45
Compression set, post-cured	22 h at 212 °F; post-cured 16 h at 230 °F	%	ASTM D 395-B	65
Compressive load	2% deflection	lb/in ²	ASTM D 575	150
Compressive load	5% deflection	lb/in ²	ASTM D 575	800
Compressive load	10% deflection	lb/in ²	ASTM D 575	1900
Compressive load	15% deflection	lb/in ²	ASTM D 575	2400
Compressive load	20% deflection	lb/in ²	ASTM D 575	2800
Compressive load	25% deflection	lb/in ²	ASTM D 575	3300
Compressive load	50% deflection	lb/in ²	ASTM D 575	7000
Tear strength, Die C		lb/fin	ASTM D 624	1100
Thermal properties				
Glass transition temperature	DMA=Dynamic Mechanical Analysis	°F	DMA	32
Low-temperature brittle point		°F	ASTM D 746	< -94
Deflection temperature under load	66 psi	°F	ASTM D 648	155
Deflection temperature under load	264 psi	°F	ASTM D 648	113
Vicat softening temperature		°F	ASTM D 1525	284
Coefficient of linear thermal expansion, flow/cross-flow		in/in/°F	ASTM D 696	6 E-05
Other properties (23 °C)				
Specific gravity		-	ASTM D 792	1.18
Shore hardness		D Scale	ASTM D 2240	70
Taber abrasion	H-18 wheel; 1,000-g; 1,000 cycles	mg Loss	ASTM D 3489	75
Bayshore resilience		%	ASTM D 2632	50