



Texin 255

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

Aromatic polyester-based thermoplastic polyurethane with Shore D hardness of approximately 55 for injection molding. Extrusion not recommended.

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	20000
Flexural modulus	158 °F	lb/in ²	ASTM D 790	9000
Flexural modulus	-22 °F	lb/in ²	ASTM D 790	175000
Instrumented impact, Peak energy	73 °F; 0.100 in; 0.5-in dart; 1.6-in clamp; 7.6 mph	ft-lb	ASTM D 3763	42.6
Instrumented impact, Peak energy	-22 °F; 0.100 in; 0.5-in dart; 3-in clamp; 7.6 mph	ft-lb	ASTM D 3763	36.9
Shear strength		ft-lb/in ²	ASTM D 732	5585
Tensile strength		lb/in ²	ASTM D 412	7000
Ultimate elongation		%	ASTM D 412	500
Tensile stress at 50 % elongation		lb/in ²	ASTM D 412	1800
Tensile stress at 100 % elongation		lb/in ²	ASTM D 412	2000
Tensile stress at 300 % elongation		lb/in ²	ASTM D 412	4000
Compression set, as molded	22 h at 73 °F	%	ASTM D 395-B	20
Compression set, as molded	22 h at 158 °F	%	ASTM D 395-B	65
Compression set, as molded	22 h at 212 °F	%	ASTM D 395-B	75
Compression set, post-cured	22 h at 73 °F; post-cured 16 h at 230 °F	%	ASTM D 395-B	15
Compression set, post-cured	22 h at 158 °F; post-cured 16 h at 230 °F	%	ASTM D 395-B	35
Compression set, post-cured	22 h at 212 °F; post-cured 16 h at 230 °F	%	ASTM D 395-B	50
Compressive load	2% deflection	lb/in ²	ASTM D 575	140
Compressive load	5% deflection	lb/in ²	ASTM D 575	565
Compressive load	10% deflection	lb/in ²	ASTM D 575	1075
Compressive load	15% deflection	lb/in ²	ASTM D 575	1465
Compressive load	20% deflection	lb/in ²	ASTM D 575	1840
Compressive load	25% deflection	lb/in ²	ASTM D 575	2245
Compressive load	50% deflection	lb/in ²	ASTM D 575	5890
Tear strength, Die C		lbf/in	ASTM D 624	900
Thermal properties				
Glass transition temperature	DMA=Dynamic Mechanical Analysis	°F	DMA	-15
Low-temperature brittle point		°F	ASTM D 746	< -90
Deflection temperature under load	66 psi	°F	ASTM D 648	139
Vicat softening temperature	Rate A; 1 kg; 50 °C/h	°F	ASTM D 1525	334
UL94 Flame Class	Thickness tested: 1.57 mm	Class	UL 94	HB
Other properties (23 °C)				
Specific gravity		-	ASTM D 792	1.21
Shore hardness		D Scale	ASTM D 2240	55
Taber abrasion	H-18 wheel; 1,000-g; 1,000 cycles	mg Loss	ASTM D 3489	50
Bayshore resilience		%	ASTM D 2632	40