



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



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Typical Properties

Property data is provided as general information only. Property values are approximate and are not part of the product specifications.

Flammability

Flammability results are based on small-scale laboratory tests for purposes of relative comparison and are not intended to reflect the hazards presented by this or any other material under actual fire conditions.

Health and Safety

Appropriate literature has been assembled which provides information concerning the health and safety precautions that must be observed when handling Bayer products mentioned in this publication. Before working with any of these products, you must read and become familiar with the available information on their hazards, proper use, and handling. This cannot be overemphasized. Information is available in several forms, e.g., material safety data sheets (MSDS) and product labels. Consult your Bayer Polymers representative or contact the Bayer Product Safety and Regulatory Affairs Department in Pittsburgh, Pennsylvania. For materials that are not Bayer products, appropriate industrial hygiene and other safety precautions recommended by their manufacturer(s) must be followed.

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