Texin DP7-1049

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Developmental product
Aromatic polyether-based thermoplastic polyurethane with a Shore hardness of approximately 45D. It can be processed by injection molding, extrusion, or blow molding.

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 D955	0.008
Mechanical properties (23 °C/50 % r. h.)					
	Flexural modulus	73 °F	lb/in²	ASTM D790	15000
	Flexural modulus	158 °F	lb/in²	ASTM D790	5000
	Tensile strength		lb/in²	ASTM D412	6000
	Ultimate elongation		%	ASTM D412	400
	Tensile stress at 50 % elongation		lb/in²	ASTM D412	1400
	Tensile stress at 100 % elongation		lb/in²	ASTM D412	1600
	Tensile stress at 300 % elongation		lb/in²	ASTM D412	3500
	Compression set, as molded	22 h at 73 °F	%	ASTM D395-B	22
	Compression set, as molded	22 h at 158 °F	%	ASTM D395-B	75
	Compression set, post-cured	22 h at 73 °F; post-cured 16 h at 230 °F	%	ASTM D395-B	20
	Compression set, post-cured	22 h at 158 °F; post-cured 16 h at 230 °F	%	ASTM D395-B	40
	Compressive load	2% deflection	lb/in²	ASTM D575	130
	Compressive load	5% deflection	lb/in²	ASTM D575	305
	Compressive load	10% deflection	lb/in²	ASTM D575	550
	Compressive load	15% deflection	lb/in²	ASTM D575	775
	Compressive load	20% deflection	lb/in²	ASTM D575	1000
	Compressive load	25% deflection	lb/in²	ASTM D575	1215
	Compressive load	50% deflection	lb/in²	ASTM D575	3125
	Tear strength, Die C		lbf/in	ASTM D624	725
Thermal properties					
	Glass transition temperature	DMA=Dynamic Mechanical Analysis	°F	DMA	-40
	Low-temperature brittle point		°F	ASTM D746	< -90
	Vicat softening temperature	Rate A; 1 kg; 50 °C/h	°F	ASTM D1525	240
Other properties (23 °C)					
	Specific gravity		-	ASTM D792	1.14
	Shore hardness		D Scale	ASTM D2240	45
	Taber abrasion	H-18 wheel; 1,000-g; 1,000 cycles	mg Loss	ASTM D3489	60
	Bayshore resilience		%	ASTM D2632	35