

# SUPERTEX<sup>®</sup>

Thermoplastics for HPHT Service



UTEX INDUSTRIES, INC.  
ISO 9001-2001 Certified  
[www.utexind.com](http://www.utexind.com)

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PROPERTY	Units	Test Method	PEEK Unfilled	PEEK Glass Fiber Reinforced*	PEEK Carbon Fiber Reinforced*	PEEK Low Wear Bearing Grade*	PEEK Continuous Carbon Fiber Reinforced*	PEEK-HT™ Unfilled	PEEK-HT™ Glass Fiber Reinforced*	PEEK-HT™ Carbon Fiber Reinforced*	PEEK/PBI Modified Polymer Unfilled	PEEK/PBI Glass Fiber Reinforced*	PEEK/PBI Carbon Fiber Reinforced*	PEEK/PBI Low Wear Bearing Grade*
	Utex #		50320	50323	50325	50327	5200	50321	50328	50329	50420	50421	50423	50422
	AccuSeal #		AC-144	AC-158	AC-150	AC-162	X	AC-126	AC-178	AC-179	AC-190	AC-191	AC-192	X
Specific Gravity	X	ISO 1183	1.26 - 1.30	1.51	1.40	1.44	1.56	1.32	1.53	1.41	1.3	1.51	1.41	1.43
Water Absorption 24 hrs @ 73°F	%	ISO 62 test	0.50	0.11	0.06	0.06	0.06	X	X	X	6.5	4.6	4.0	3.8
Tensile Strength	psi	ISO 527	14,000	24,000	33,000	20,000	0° 270,000	16,000	23,800	31,600	14,000	26,000	35,000	16,000
Tensile Elongation	%	ISO 178	34	2.0	1.8	2.2	0° 2.0	20	2.9	2.2	2.2	1.6	1.5	1.1
Flexural Strength	psi	ISO 178	23,000	33,500	48,000	30,000	0° 16,000	26,500	38,000	49,500	23,000	30,000	45,000	23,000
Flexural Modulus	psi	ISO 178	579,700	1,333,300	2,700,000	1,188,400	0° 17,000,000	595,000	1,420,000	2,640,000	710,000	2,000,000	3,200,000	2,000,000
Compressive Strength Parallel to Flow	psi	ASTM D-695	17,000	31,000	34,500	21,500	0° 160,000	19,900	X	X	30,000	30,000	32,000	18,000
Rockwell Hardness	Scale	X	99M	103M	107M	X	X	108R	X	X	25A	25A	24A	24A
Izod Impact Strength (Notched)	ft. lbs./in.	ISO 180/A	1.13	1.55	1.44	1.08	X	0.95	X	X	1.9	2.4	2.4	1.7
Heat Distortion Temp. @ 264 psi	°C (°F)	ISO 75-A-f	152 (306)	315 (599)	315 (599)	293 (559)	X	165 (329)	350 (662)	368 (694)	X	X	336 (637)	X
Coefficient of Thermal Expansion Average Direction, below Tg	10 <sup>-6</sup> /°C	TMA	55	45	40	45	X	55	45	35	40	30	30	30
Maximum Continuous Service Temperature **	°F	UL 746B	500	464	464	464	550	X	X	X	600	600	600	600
Glass Transition Temperature (Tg)	°F	DSC	289	289	289	289	289	315	315	315	485/600	485/600	485/600	485/600
Coefficient of Friction (μ)	X	X	X	X	X	X	X	X	X	X	X	X	X	X

X = No Data Available

\* These materials are anisotropic and properties will vary with direction of measurement.

\*\* Maximum continuous service temperature is relevant to pressure, load and application parameters. Consult Utex for maximum application temperature.

The above values for properties are results of ASTM tests on representative injection molded samples and should not constitute a product specification. These values are subject to change without notice.

The data are short term test data measured by ISO, ASTM, BS, & DIN standard methods. Most of these results should not be used in the design of load bearing articles because the properties of all thermoplastics depend on temperature and time under load. In addition, fiber reinforced grades show further variation in properties because of fiber orientation. Except where otherwise stated, all data have been obtained from unannealed specimens tested in air.

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