GATONE™ PEEK

(Polyether Ether Ketone)

Key benefits:

- High thermal resistance with continuos
- Use temperature of 260°C
- Excellent Mechanical & Dielectric properties
- Excellent tribological behavior
- Excellent flammability and low levels of smoke during combustion
- Halogen free
- Resistance to Chemical, Hydrolysis and Radiation

GATONE™PEEK offers an alternative to design engineers Intending make use of Polyether Ether Ketone for the realization of parts in thermoplastic materials where higher performance under extreme working conditions are needed. The Properties of Gatone™PEEK, combined with the ease of processing and machining , can offer significant cost reductions in the realization of parts traditionally made with other materials such as stainless steel, light alloy, ceramics, glass ….. In addition to the unfilled versions, GATONE™ PEEK is also available with different levels of glass and or carbon fiber reinforcement. There are additional self Lubricating grades and further tailor made grades to meet specific requirements.

PROPERTIES OF GATONE™ PEEK (TYPICAL VALUES)

Property	Test Method	Units	5300 5400 5600	5700	5330GF 5630GF	5330 CF 5630CF	5330 FC 5630FC
General			**Unfilled**	**High Flow unfilled**	**30%glass Fibre filled**	**30% Carbon Fibre filled**	**Tribological Grade**
Specific gravity	ISO 1183	g/cc	1.32	1.30	1.5	1.4	1.42
Fiber Content	-	%	0	0	30	30	-
Mechanical							
Tensile Strength	ISO 527	MPa	95	91	160	220	140
Tensile Modulus	ISO 527	MPa	3800	3800	10000	22000	12000
Elongation at break	ISO 527	%	>50	5	2.5	2.5	2.5
Flexural Strength	ISO 178	MPa	160	145	260	350	210
Flexural Modulus	ISO 178	MPa	3800	3600	10000	18000	11100
Izod Impact	ISO 179	KJ/m^2	6.0	4.4	9.5	8.0	5.0
Thermal							
HDT AT 1.82MPa	ISO 75	°C	150	-	315	315	315
Glass Transition	DSC	°C	148	148	148	148	148
Continuous use temp (Expected)	UL-746B	°C	260	260	260	260	260
Electrical							
Volume Resistivity	IEC 93	Ohm cm	>1016	>1016	> 1016	-	-
Surface Resistivity	IEC 93	Ohm	>1014	>1014	>1014	-	-
Comparative Tracking Index	IEC112	V	150	150	150	-	-
Dielectric Strength	IEC 243/1	kV/mm	19	19	20	-	-
Flammability							
Rating @ 0.8mm Thickness	UL-94	-	V-0	V-1	V-0	V-0	V-0
Miscellaneous							
Rockwell Hardness	ASTM D 785	M scale	100	100	102	105	90

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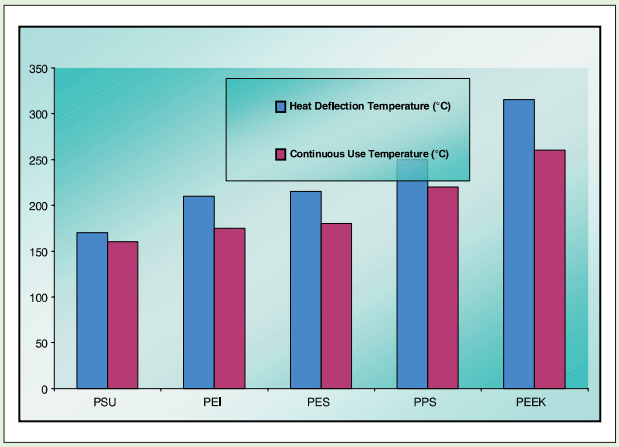
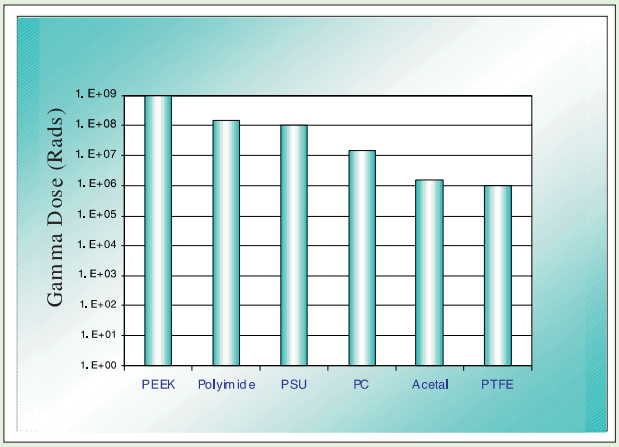
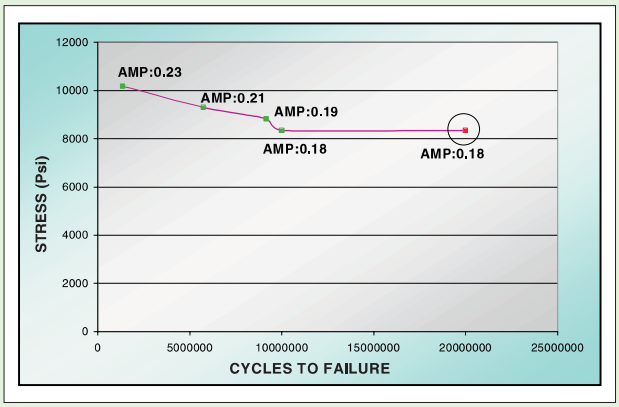
HDT & CUT of Glass Reinforced Engineering Polymers



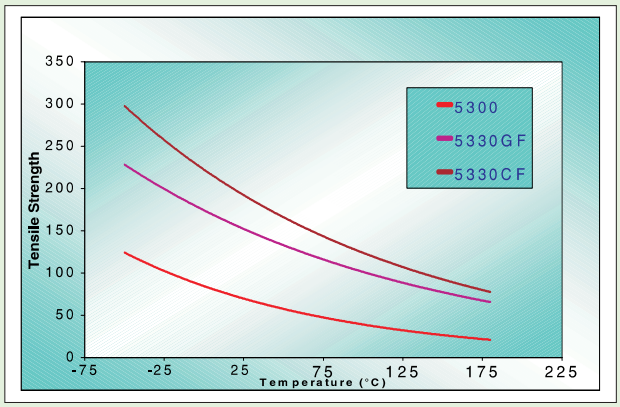
Radiation Resistance of Polymers



Dynamic Fatigue Test For GATONE™ 5330CF Test Conducted at 250°F, Speed: 33.3Hz (2000rpm)



Tensile Strength Vs Temperature for Unfilled & reinforced PEEK grades



INDUSTRY SECTOR

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