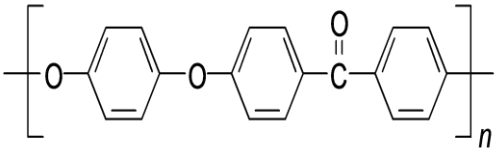
systemseals

MATERIAL SPECIFICATION SHEET

MM80



Polyetheretherketone
(Inj. Molded PEEK Blend)

SPECIFICATIONS

Property	Spec	Value
Specific Gravity	ISO 1183	1.30g/cm³
Hardness Rockwell M	D785	M99
Hardness Shore D		87±5
Tensile Strength @ 23C	ISO 527-2/1B/50	105MPa
Elongation @ break	D-638	55%
Modulus of Elasticity in tension	D-638	3500MPa
Modulus of Elasticity in flexure	D-790	4200MPa
Coefficient of friction	-	0.34
dynamic		
Crystalline melting point	DSC	343C
Glass transition point	DSC	143C
Continuous service temperature	UL 746B	260C
Max. service temperature (air)		315C
Coefficient of Linear Expansion	D-696	4.7
10-5/C		

DESCRIPTION

MM80 is a PEEK material with hardness 99M and 87D, specially compounded for injection molded applications. Polyetheretherketone (PEEK) belongs to ketone polymer family. It has a highly conjugated molecular structure with aromatic, ketone and ether linkages. The double ether linkages in PEEK make it more flexible and capable of crystalizing than other members in the ketone polymer family. This chemical structure provides PEEK with exceptional physical and chemical stability at very high temperatures and in aggressive chemical environments. PEEK has much greater mechanical properties and dimensional integrity at high temperatures than other polymers thus it is regarded as the most advanced high performance polymer in demanding applications. Due to the nature of crystallinity of PEEK, its properties can be affected by process temperature controls. Fillers improve PEEK's performance. Glass or carbon fiber can increase the mechanical properties and dimensional stability of PEEK. PTFE, graphite or carbon powder can reduce friction or increase wear life. PEEK articles can be molded by injection or compression process. PEEK is relatively new and it was commercialized only in the late 1970s.