



Polyetheretherketone (PEEK/ Glass/PTFE)

SPECIFICATIONS

Property	Spec	Value
SPECIFIC GRAVITY	ASTM D 792	1.44
IMPACT STRENGTH IZOD NOTCHED 1/8IN (3.2MM) SECTION UNNOTCHED 1/8IN (3.2MM) SECTION	ASTM D 256 ASTMD 4812	64 J/M 641 J/M
TENSILE STRENGTH	ASTM D 638	152 MPA
TENSILE ELONGATION	ASTM D 638	2.7%
TENSILE MODULUS	ASTM D 638	8964 MPA
FEXURAL STRENGTH	ASTM D 790	248 MPA
FLEXURAL MODULUS	ASTM D 790	8274 MPA
Deflection Temperature @264 psi (1820 kPa)	ASTM D 648	288°C

DESCRIPTION

MK15 is a PEEK material specially compounded with glass and PTFE. 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 crystallizing 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.