

Epratone® PEEK

A high-performance plastic with a high mechanical strength, stiffness and hardness. The material has a very high temperature resistance, excellent chemical resistance and is also highly resistant to hydrolysis. The material has good creep resistance at high temperatures, high wear resistance and excellent resistance to high energy radiation.

General properties	Test method	Value	Unit
ISO code:	ISO 1183	PEEK	
Density:	ISO 1183-1	1,31	g/cm3
Water absorption in Air (23°C / 50% RH)	ISO 62	0,2	%
Water absorption in Air (23°C / 100% RH)	ISO 62	0,45	%
Resistance to hot water	n/a	+	
Weather resistance	n/a	-	
Mechanical properties			
Elongation at break:	ISO 527	15	%
Ball indentation hardness	ISO 2039	210	MPa
Tensile modules of elasticity	ISO 527	4100	MPa
Charpy impact strength - notched	ISO 179	2,5	kJ/m2
Charpy impact strength - unnotched	ISO 179	No Break	kJ/m2
Compressive stress at 1%	n/a	23	MPa
Coefficient of friction		0,3-0,5	
Thermal properties			
Melting temperature	n/a	340	°C
Max. allowable service temp (short period)	n/a	300	°C
Max. allowable service temp (long period)	n/a	250	°C
Min. service temperature	n/a	-40	°C
Coefficient of linear expansion	n/a	50	x10 -6 m/(m*K)
Flammability	UL94	V0	
Electrical properties			
Dielectric dissipation (at 1MHz)	ISO 60250	0,001	Ω
Electric strength	ISO 60243	20	kV/mm
Volume resistivity	ISO 60093	>10^14	Ω.cm

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