

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.

Color	: beige, black	Sheet	: 5 t/m 100 mm
Mechanical	: easy to machine	Rod	: 3 t/m 200 mm
Glue severability	: not possible	Tube	: 50 t/m 200 mm
Weldability	: not possible	Foil	: on request
Food contact	: FDA	Fixed formd	:

General properties	Test method	Value	Unit
ISO code	ISO 1183	PEEK	
Density	ISO 1183-1	1,31	g/cm ³
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 Indention Hardness	ISO 2039	210	MPa
Tensile modulus of elasticity	ISO 527	4100	MPa
Charpy impact strength - notched	ISO 179	2.5	kJ/m ²
Charpy impact strength - unnotched	ISO 179	no break	kJ/m ²
Compressive stress at 1%	n/a	23	MPa
Coefficient of friction	n/a	0.25~0.5	
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)
Thermal conductivity at 23 °C	n/a	0.25	W/K.m.
Flammability	UL94	V0	
Electrical properties			
Dielectric Dissipation (@1MHz)	ISO 60250	0,001	Ω
Electric Strength	ISO 60243	20	kV/mm
Surface Resistivity	ISO 60093	>10 ¹⁴	Ω.cm
Optical properties			
Light transmission	ASTM D1003		%
Refractive index	ISO 489		

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