

PEKK Technical Data Sheet (TDS)

PEKK is a semi crystalline thermoplastic from the PAEK family, commonly used in extreme operating environments. It has similar performance as PEEK which has excellent mechanical and chemical resistance properties that are retained to high temperatures, but relatively easier to print than peek.

It is often used in demanding applications such as aerospace, automotive, chemical, and medical industries.

IEMAI 3D high performance PEKK filament is based on FFF/FDM technology, with a diameter of 1.75 mm, having excellent inter-layer adhesion, and able to improve the strength, durability, and shock resistance of the prototype.

Mechanical Properties	Conditions	Methods	Value
Tensile Strength	23 °C/50% rh	ISO 527	90 Mpa
Tensile Elongation	23 °C/50% rh	ISO 527	5%
Flexural Strength	23 °C/50% rh	ISO 527	3GPa
Flexural Modulus	23 °C/50% rh	ISO 178	150MPa
Compressive Strength	23 °C/50% rh	ISO 178	2.5GPa
Charpy Impact Strength	23 °C/50% rh	ISO 178	6%
Izod Impact Strength	23 °C/50% rh	ISO 179 1eU	NB

Thermal Data			
Continuous Service Temp.	23 °C/50% rh	IEC 60216	255°C
Service Temperature	During lifetime max. 200h		300°C

Physical Data			
Specific Gravity		ISO 1183-2	1.27gcm ⁻³
Water Absorption	23°C/24h	ISO 62	<0.1%
Melt Volume Rate	MVR 380°C/2,16 kg	ISO 1133	20cm ³ /10 min
Linear Mould Shrinkage		DIN 16742	1,0-1.6%
Flammability Behavior		UL 94	(V-0)

Print Recommendation	
Nozzle Temperature	360 -400 °C
Bed Temperature	90 -130 °C
Print Speed	30-70 mm/s
Chamber Temperature	90-130 °C
Cooling Fan	0-50%