

# Technical data sheet – 3D Filament

## PEEK, PEEK CF, PEEK GF

Polyether Ether Ketone PEEK is a semi crystalline thermoplastic with excellent mechanical and chemical resistance properties that are retained to high temperatures up to 250C. PEEK is known as one of the highest performing engineering thermoplastics in the world. PEEK is widely used for applications in aerospace, automotive, oil and gas and medical industries. The **INNOVATIVE MARKETING** PEEK Filament –Make” **3DAMSS**” has unique properties because it does not come into contact with water during the production process and is directly packaged in a vacuum packaging. These properties make our PEEK Filament particularly suitable for usage in FDM and FFF 3D printers. The material has an excellent adhesion between inter layers, which results in high impact resistance, Mechanical strength, durability, and make it printer friendly

### FILAMENT PROPERTIES

PROPERTIES	TEST METHODS	UNITS	Typical Values		
			PEEK	PEEK CF 10%	PEEK GF 15 %
Diameter	INS-6712	mm	1.75 ± 0.05	1.75 +/-0.05	1.75 +/-0.05
Specific gravity	ISO 1183	g/cm3	1.30	1.39	1.14
Moisture rate	INS-6711	%	< 1	< 1	< 1
MFI (@380°C – 5 kg)	ISO 1133	g/10min	20-30	10 - 15	10 – 15
Glass transition Tg	ISO 11357 DSC (10°C/min - 20-410°C)	°C	143	143	143
Melting temp Tm	ISO 11357	°C	343	343	343
	TEST METHOD	UNITS	PEEK	PEKKCF 10%	PEEK15%GF
Tensile Strength	ISO 527	Mpa	85 – 95	100-110	110-120
Tensile Elongation	ISO 527	%	3 – 8	2 -5	2.5
Tensile Modulus	ISO 527	GPa	3.0 -3.5	5-8	4.5
Flexural Strength	ISO 178	MPa	140-150	135-145	150-160
Flexural Modulus	ISO 178	GPa	3 - 4	7-9	5
Flexural Elongation	ISO 178	%	5-8	4-7	4.5
Heat Distortion Temp.	ISO 75	°C	150	265	260
Continuous Service Temp.	UL 746B	°C	250	270	270
Maximum (short term) Use Temp.		°C	260	290- 300	290- 300
Flammability Behaviour	UL	Rating	(V-0)	(V-0)	(V-0)

PRINT RECOMMANDATION	PEEK	PEEK 10% CF	PEEK GF 15%
Nozzle Temp	360-420 °C	380 – 400 °C	380-400°C
Bed Temp	115 °C	140 °C	140°C
Print Speed	15 -35 mm/s	15-35 mm/s	15-35 mm/s
Drying	120C- 4 hrs	120°C-4 hrs	120°C-4hrs
Bed Adhesion	PEI	PEI	PEI

Disclaimer: The testing has been done in house so we extend no warranties what so ever, expressed or implied, including but not limited to, any implied fitness for any particular purpose. From the moment the product is shipped it is beyond our control. The information in this document is believed to be correct at the time of writing. However, handling, processing, settings, the type of 3D printer, slicing and other variables are completely up to the user. The method through which the product is used can be varied. It is up for the customer to determine how it is 3D printed and whether it is fit for purpose or suited to a particular application.



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