

CFR-PEEK TDS Technical Data

CFR-PEEK (carbon fiber-polyetheretherketone) is a composite carbon fiber (short fiber, 15%) PEEK material, black opaque, with an excellent combination of properties including mechanical properties, chemical resistance, thermal properties and electrical properties, and can be used under harsh conditions.

IEMAI high-performance CFR-PEEK material is a 3D printed filament for FFF/FDM technology. It has a universal wire diameter of 1.75mm and excellent interlayer adhesion, which effectively improves the impact resistance and strength of printed products.

CFR-PEEK is currently used in harsh conditions such as aerospace, automotive, chemical, electronic semiconductors and medical applications.

机械性能 Mechanical	条件 Conditions	标准 Methods	数据 Value
拉伸强度 Tensile Strength	Yield,23℃	ISO 527	112 Mpa
断裂伸长率 Tensile Elongation	Break,23℃	ISO 527	10%
压缩强度 Compression Strength	2%,5mm/min, 10 N	ISO 604	47 Mpa
简支梁冲击强度 Charpy Impact Strength	Max.7.5J	ISO 179/1eA	83 kJ m ⁻²
球压入硬度 Ball indentation hardness		ISO 2039-1	298 Mpa

热性能 Thermal Data			
熔点 Melting Point		ISO 11357	341℃
玻璃化转变 Glass Transition	Onset	ISO 11357	147℃
使用温度 Service Temperature	Long time		260℃
使用温度 Service Temperature	Short time		300℃
热膨胀系数 Coefficient Of Thermal Expansion	100-150 ^o C, long	ISO 11359	6*10 ⁻⁵ K ⁻¹

其他 Other			
碳纤维填充比例 CF Fill Ratio			15%
阻燃等级 Flammability (UL94)	Corresponding to	DINI EC 60695-11-10	V0
吸水率 Water Absorption By Immersion	Saturation,23℃,24h	ISO 62-1	0.03%

打印推荐 Print Recommend	
喷嘴温度 Nozzle Temperature	400-440℃
热床温度 Bed Temperature	80-130℃
打印速度 Print Speed	取决于打印机, 一迈推荐打印速度: 40-50mm/s Depends on the printer , IEMAI 3D printer : 40-50mm/s