

Carbon Fiber Reinforced PEEK-OPTIMA

Catlog Number: CRSM-0073

• Description

Medical-grade compatible PEEK composite with high carbon fiber loading for bone-equivalent stiffness in orthopedic and prosthetic research.

• Basic Information

Base Material: PEEK
Reinforcement Type: Chopped Carbon Fiber
Reinforcement Volume (%): 0.3
Density (g/cm³): 1.42
Tensile Strength (MPa): 195
Tensile Modulus (MPa): 18000
Elongation at Break (%): 1.5
Flexural Strength (MPa): 285
Flexural Modulus (MPa): 16500
Heat Deflection Temp (0.45MPa): 320
Glass Transition Temp (T_g): 143
Melting Point (°C): 343
Thermal Conductivity (W/mK): 0.52
Flame Retardancy (UL94): V-0
Surface Resistivity (Ω): 10⁵ - 10⁷
Water Absorption (%): 0.08
Printing Temp (°C): 410-450
Bed Temp (°C): 130-160
Chamber Temp (°C): 110-150
Nozzle Type: Hardened Steel
Layer Height (mm): 0.1
Shrinkage Rate (%): 0.1
Continuous Use Temp (°C): 260
Impact Strength (kJ/m²): 18

 For Research or Industrial Raw Materials, Not For Personal Medical Use!