TechData@readyplastics.com
774 489 6842

CARBON-REINFORCED PEEK

Carbon Nanotube-Reinforced Polyether Ether Ketone

ASTM D257 — SURFACE RESISTIVITY

ANSI/ESD S20.20 COMPATIBLE

UL 94 V-0

ROHS / REACH COMPLIANT

ESD-rated PEEK for high-temperature electronics handling.

PEEK compounded with conductive carbon nanotube reinforcement, engineered for permanent electrostatic-dissipative performance in high-temperature service. The carbon network delivers controlled surface resistivity while preserving PEEK's exceptional mechanical strength, chemical resistance, and continuous-use temperature, making this the right choice for semiconductor and electronics fixturing exposed to elevated heat or aggressive process chemistries.

APPLICATIONS

- Semiconductor wafer carriers and end-effectors
- Test sockets and burn-in fixtures
- ESD-safe tooling for high-temperature electronics processes
- Vacuum and plasma chamber components
- Aerospace ESD applications requiring continuous-heat service

STANDARD COLORS

Black

GENERAL

Density ASTM D792	0.047 lb/in³ 1.3 g/cm³
Water absorption 24 / 96 h immersion @ 73°F · ASTM D570	-/- / -/- mg / %
Flammability rating UL 94, 3 / 6 mm thickness · UL 94	V-0/V-0

MECHANICAL

Tensile strength At yield / break · ASTM D638	14,500 psi 99 MPa
Tensile strain at break ASTM D638	15 %
Tensile modulus ASTM D638	580,000 psi 3,900 MPa
Izod impact (notched) ASTM D256	0.8 ft·lb/in 42 J/m
Rockwell hardness ASTM D785	R120

OPERATING ENVIRONMENT

Heat deflection temperature 264 psi (Method A) · ASTM D648	320 °F 160 °C
Max service temperature Continuous (5,000 / 20,000 h)	480 °F 245 °C

ELECTRICAL

Volume resistivity ASTM D257	106 ~ 1010 Ω·cm
Surface resistivity ASTM D257	>105 ~ 109 Ω