

PEEK 30% CF



POLYETHER ETHER KETONE WITH CARBON

Material description

PEEK 30% CF is reinforced with 30% carbon fibres. It thus achieves the highest strength values in the PEEK family. Due to the carbon fibre content, the thermal conductivity is increased and the material is no longer electrically insulating.

Conformities

RoHS, REACH

| Physical properties | Test method | Value | Unit |
|---------------------|-------------------|--|-------|
| Density | DIN EN ISO 1183-1 | 1.4 | g/cm3 |
| Water absorbtion | DIN EN ISO 62 | 0.14 | % |
| Sliding friction | |  | |
| Abrasion resistance | |  | |

| Mechanical properties | Test method | Value | Unit |
|-------------------------------|-------------------|-------|-------|
| Yield stress | DIN EN ISO 527 | 120 | MPa |
| Elongation at break | DIN EN ISO 527 | 7 | % |
| Tensile modulus of elasticity | DIN EN ISO 527 | 6500 | MPa |
| Notched impact strength | DIN EN ISO 527 | 4 | kJ/m2 |
| Ball indentation hardness | DIN EN ISO 2039-1 | 310 | MPa |

| Thermal properties | Test method | Value | Unit |
|----------------------------------|-------------------|-------------|-----------------------------------|
| Thermal conductivity | DIN 52612-2 | 0.92 | W/(m*K) |
| Heat capacity | DIN 52612-1 | 1.2 | kJ/(kg*K) |
| Coefficient of thermal expansion | DIN 53752 | 25 | 10 ⁻⁶ *K ⁻¹ |
| Operating temperature short term | | 310 | °C |
| Operating temperature long term | | -20 bis 250 | °C |
| Heat deflection temperature | DIN EN ISO 75 / A | 315 | °C |
| Flammability | UL 94, 3 mm | V0 | |

| Electrical properties | Test method | Value | Unit |
|-----------------------|-------------|-----------------|--------|
| Volume resistivity | IEC 60093 | 10 ⁴ | Ω * cm |
| Surface resistivity | IEC 60093 | 10 ⁴ | Ω * cm |
| Dielectric strength | IEC 60243 | 10 | kV/mm |

These technical data have been determined as average values by our suppliers from many individual measurements. In all measurements, the test specimens were tested in the dry state. We pass on the data with reservation. The table does not claim to be complete or correct. Material technology is subject to constant further development. No rights or guarantees can be derived from it. Own tests are necessary because the environmental and operating conditions (humidity, temperature, mechanical forces, radiation and chemicals, etc.) set limits in the application.