

TECAPEEK SD black - Stock Shapes (rods, plates, tubes)

Chemical Designation

PEEK (Polyetheretherketone)

Colour

black opaque

Density

1.71 g/cm³

Main features

- electrically static dissipative
- excellent chemical resistance

Target Industries

- semiconductor technology

| Mechanical properties | parameter | value | unit | norm | comment |
|---------------------------------------|--------------------------|-----------------------------------|----------------------------------|----------------------|---|
| Tensile strength | 50mm/min | 91 | MPa | DIN EN ISO 527-2 | (1) For tensile test: specimen type 1b |
| Modulus of elasticity (tensile test) | 1mm/min | 5800 | MPa | DIN EN ISO 527-2 | 1) (2) For flexural test: support span 64mm, norm specimen. |
| Elongation at break (tensile test) | 50mm/min | 2 | % | DIN EN ISO 527-2 | (3) Specimen 10x10x10mm |
| Flexural strength | 2mm/min, 10 N | 148 | MPa | DIN EN ISO 178 | 2) (4) For Charpy test: support span 64mm, norm specimen. |
| Modulus of elasticity (flexural test) | 2mm/min, 10 N | 5600 | MPa | DIN EN ISO 178 | |
| Compression strength | 1% / 2% 5mm/min, 10 N | 28 / 53 | MPa | EN ISO 604 | 3) |
| Impact strength (Charpy) | max. 7.5J | 43 | kJ/m ² | DIN EN ISO 179-1eU | 4) |
| Shore hardness | D | 91 | | DIN EN ISO 868 | |
| Thermal properties | parameter | value | unit | norm | comment |
| Glass transition temperature | | 151 | °C | DIN EN ISO 11357 | 1) (1) Found in public sources. |
| Melting temperature | | 341 | °C | DIN EN ISO 11357 | |
| Service temperature | short term | 300 | °C | DIN 53765 | |
| Service temperature | long term | 260 | °C | DIN 53765 | |
| Thermal expansion (CLTE) | 23-60°C, long. | 5 | 10 ⁻⁵ K ⁻¹ | DIN EN ISO 11359-1;2 | |
| Thermal expansion (CLTE) | 23-100°C, long. | 5 | 10 ⁻⁵ K ⁻¹ | DIN EN ISO 11359-1;2 | |
| Thermal expansion (CLTE) | 100-150°C, long. | 7 | 10 ⁻⁵ K ⁻¹ | DIN EN ISO 11359-1;2 | |
| Electrical properties | parameter | value | unit | norm | comment |
| surface resistivity | | 10 ⁶ - 10 ⁹ | Ω | DIN EN 61340-2-3 | |
| Other properties | parameter | value | unit | norm | comment |
| Water absorption | 24h / 96h (23°C) | 0.02 / 0.03 | % | DIN EN ISO 62 | 1) (1) Ø ca. 50mm, h=13mm |
| Flammability (UL94) | | V0 | | - | |

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Manufactured by: Ensinger Group,
a German based plastic manufacturer

63 Hillview Avenue #02-03
Lam Soon Industrial Building
Singapore 669569
Tel +65 65524177
Fax +65 65525177
www.ensinger.com.sg

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Ensinger International GmbH
(Singapore Branch)
for Asia Pacific other than Japan+China