

APSOplast® PEEK natural (brownish grey)

Engineering Plastic Technology Technical Data Sheet

Application purpose and characteristics

Chemical engineering, mechanical engineering, electrical engineering, aerospace engineering, automotive industry, food technology, semiconductor technology, vacuum technology, textile industry

High heat deflection temperature, good machinability, inherently flame resistant, high-energy radiation resistant, good "stick-slip" properties, very high chemical resistance, high creep strength, resistant against hydrolyse and superheated steam

Product description

Material name, long description	Polyetheretherketone
Material name, short description	PEEK
Material Code	PEEK 00.001-00
Density	1.31 g/cm ³
Color	natural (brownish grey)

Mechanical properties

Modulus of elasticity and tension	Test value: 4000 MPa Test norm: DIN EN ISO 527
Yield stress	Test value: 110 MPa Test norm: DIN EN ISO 527
Elongation at rupture	Test value: 20 % Test norm: DIN EN ISO 527
Shore hardness	Test value: 88 Shore D Test norm: DIN EN ISO 868
Ball indentation hardness	Test value: 230 MPa Test norm: DIN EN ISO 2039-1

Thermal properties

Min. operating temperature	Test value: -60 °C
Max. operating temperature long term	Test value: 250 °C
Max. operating temperature short term	Test value: 310 °C
Coefficient of linear thermal expansion	Test value: 50 10 ⁻⁶ K ⁻¹ Test norm: DIN 53752
Crystalline melting point	Test value: 343 °C Test norm: ISO 11357-3
Specific heat capacity	Test value: 1.34 kJ/kg·K Test norm: DIN 52612
Heat deflection temperature	Test value: 152 °C Test norm: DIN EN ISO 75 / A
Thermal conductivity	Test value: 0.25 W/m·K Test norm: DIN 52612-1

Electrical properties

Dielectric loss factor	Test value: 0.001 Test norm: IEC 60250 Test parameter: 50 Hz
Dielectric constant	Test value: 3.2 Test norm: DIN IEC 60250
Dielectric strength	Test value: 20 kV/mm Test norm: IEC 60243
Volume resistivity	Test value: 4.9*10 ¹⁶ Ohm·cm Test norm: IEC 60093
Surface resistivity	Test value: 10 ¹⁸ Ohm Test norm: IEC 60093

Other properties

Flammability	Test value: V0 / V0 Test norm: UL 94 Test parameter: Thickness 3 mm / 6 mm
Moisture absorption	Test value: 0.2 % Test norm: DIN EN ISO 62

Approvals

- FDA 21 CFR 177.2415
- 1935/2004 EC
- 10/2011 EU
- GMP 2023/2006 EC

