

Application purpose and characteristics

Electrical and electronic industries, medical technology, aerospace engineering

High rigidity also at high temperatures, very low smoke emissions, high resistance to high energy radiation

Material name, short description	PEI
Material name, based on technical standards	Polyether imide
Density	1.27 g/cm ³
Color	natural
Compound code	PEI 00.004-00

Mechanical properties

Tensile strength	129 N/mm ² ISO 527-1,-2 23 °C
Elongation at break	13 % ISO 527-1,-2 23 °C
Elongation at yield	7 % ISO 527-1,-2 23 °C
Flexural modulus of elasticity	3500 N/mm ² ISO 527-1,-2 23 °C
Compressive strength 1	31 N/mm ² ISO 604 23 °C, 1% strain
Compressive strength 2	61 N/mm ² ISO 604 23 °C, 2% strain
Compressive strength 3	137 N/mm ² ISO 604 23 °C, 5% strain
Ball indentation hardness	165 N/mm ² ISO 2039-1 23 °C
Notch impact strength	3.50 kJ/m ² ISO 179-1/1eA 23 °C

Other attributes

Moisture absorption	0.7 % 23 °C, 50 % RH
Water absorption	0.19 % ISO 62 24 h, 23 °C

Thermal attributes

Min. operating temperature	-50 °C
Max. operating temperature long term	170 °C
Max. operating temperature short term	200 °C
Coefficient of linear thermal expansion 1	50 * 10 ⁻⁶ m/(m*K) 23°C - 100°C
Glass transition temperature	215 °C ISO 11357-1,-2 DSC 20°C/min
Heat deflection temperature 1	195 °C ISO 75-1,-2 method A: 1.8 N/mm ²
Thermal conductivity	0.24 W/(m·K) 23 °C

Electrical attributes

Comparative tracking index	175 IEC 60112
Dielectric dissipation factor 1	0.002 DIN IEC 60250 100 Hz
Dielectric strength 1	27 kV/mm DIN IEC 60243-1
Surface resistivity	≥10 ¹³ Ω ANSI/ESD STM 11.11

In compliance with **RoHS** and **REACH** directives.

This information is based on our available data. These values are measured on standard test specimens and are within the normal tolerance range of material properties and do not represent guaranteed property values. Therefore they shall not be used for specification purposes. The customer is solely responsible for quality and suitability of material for his application. He has to test usage and processing prior to use. Angst+Pfister makes no guarantees for the suitability of the material for any given application and assumes no obligation or liability in connection with the information provided above.