

Technical Data Sheet

PPE natural

PPE, modified polyphenylene ether

Typical Properties

- Very low moisture absorption, high dimensional stability
- Very good electrical insulating properties
- High hydrolysis resistance, flame retardant (UL 94 V-1)
- Low weight (1.08 g/cm³)

Typical Industries

- Electrical Industry
- Medical Technology
- Mechanical Engineering

	Test Method	Unit	Value
General Properties			
Density	ASTM D792	g / cm ³	1.08
Water absorption (24 h)	ASTM D570	%	0.07
Water absorption (saturation)	ASTM D570	%	0.20
Flammability (thickness 3.2 mm)	UL 94		V-1
Mechanical Properties			
Yield stress	ASTM D638	MPa	65
Elongation at break	ASTM D638	%	30
Tensile modulus of elasticity	ASTM D638	MPa	2.400
Flexural strength	ASTM D790	MPa	92
Flexural modulus	ASTM D790	MPa	2.500
Notched impact strength (Izod)	ASTM D256	J / m	187
Rockwell hardness	ASTM D785	scale R	119
Coefficient of friction (dynamic)	Average		0.39
Thermal Properties			
Thermal conductivity	Average	W / (m * K)	0.23
Coefficient of linear thermal expansion	ASTM D696	10 ⁻⁶ / K	60
Service temperature, long term	Average	°C	104
Heat deflection temperature (1.8 MPa)	ASTM D648	°C	127
Heat deflection temperature (0.45 MPa)	ASTM D648	°C	143

	Test Method	Unit	Value
Electrical Properties			
Dielectric constant (1 MHz)	ASTM D150		2.7
Dissipation factor (1 MHz)	ASTM D150		0.001
Dielectric strength	ASTM D149	kV / mm	20
Surface resistivity	ASTM D257	Ω	10^{17}

The specified values are average values obtained from individual measurements and are up to the latest standards. They are intended merely as information about our products and as an aid to the selection of material. We therefore cannot legally bindingly vouch for specific properties or suitability for specific purposes, as properties may also depend, for example, on the dimensions of the semi-finished products. The short-time maximum operating temperature applies only to applications that involve a low mechanical load during a few hours only. The long-term maximum operating temperature is based on the heat-ageing of the plastics through oxidation, which results in a reduction of the mechanical properties. On thick-walled parts only the surface layer - which can be better protected by the addition of antioxidants - is affected by oxidation at high temperatures. The core normally remains unimpaired. The short-term and long-term maximum operating temperatures depend on pressure and media. The minimum operating temperature is mainly determined by possible impact and shock stresses during operation. The specified values apply to low stresses.

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