Technical Data Sheet

PPS

Polyphenylensulfid

General properties	Test method	Unit	Guideline value
Density	DIN EN ISO 1183-1	g / cm³	1,35
Moisture absorption	DIN EN ISO 62	%	0,0
Firing behaviour (thickness 3 mm / 6 mm)	UL 94	---	V0/V0
Mechanical properties			
Yield stress	DIN EN ISO 527	MPa	90
Elongation at break	DIN EN ISO 527	%	3
E-Modulus	DIN EN ISO 527	MPa	4150
Shore hardness	DIN EN ISO 868	scale D	88
Thermal properties			
Melting temperature	ISO 11357-3	°C	285
Heat deflection temperature	DIN EN ISO 75, Verf. A, HDT	°C	110
Linear expansion coefficient	DIN 53752	10^{-6} / K	120 … 190
Service temperature longterm	Average value	°C	-20 / 220
Service temperature shortterm (max.)	Average value	°C	260
Electrical properties			
Contact resistance	DIN EN 62631-3-1	Ω * cm	$>10^{13}$
Surface resistance	DIN EN 62631-3-2	Ω	$>10^{15}$

The short-term maximum operating temperature only applies to applications with very low mechanical loads over a few hours. The long-term maximum operating temperature is based on the thermal ageing of the plastics due to oxidation, which results in a reduction in the mechanical properties. Specified are the temperatures that cause a 50% reduction in tensile strength (measured at room temperature) compared to the initial value after a period of at least 5,000 hours.
This value does not provide any information on the mechanical strength of the material at high application temperatures. In the case of thick-walled parts, oxidation at high temperatures only affects the surface layer, which can be better protected by the addition of antioxidants. The core area of the parts remains undamaged in any case. The minimum operating temperature is largely determined by possible impact or shock loads during use. The specified values refer to low impact stress. The electrical characteristic values were measured on natural-coloured, dry material. With other colours (especially black) or damp material or damp material, there may be significant changes in the electrical characteristics. The values stated are average values that are verified by constant are verified by continuous statistical tests. They correspond to the specifications of DIN EN 15860. They are only intended to provide information about our products and are intended as an aid to material selection. We do not guarantee specific properties or suitability for specific applications in a legally binding manner. As the properties also depend on the dimensions of the semi-finished products and the degree of crystallisation (e.g. nucleation by pigments), the actual property values of a particular product may differ slightly from those product may deviate somewhat from the specifications.

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