

### Chemical Designation

PPS (Polyphenylsulfide)

### Colour

black

### Density

1.5 g/cm<sup>3</sup>

### Fillers

carbon fibres, graphite

### Main features

- good slide and wear properties
- for injection moulding

### Target Industries

- automotive industry
- mechanical engineering

<i>Mechanical properties</i>		<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Tensile strength			150	MPa	DIN EN ISO 527-1	
Modulus of elasticity (tensile test)			19500	MPa	DIN EN ISO 527-1	
Elongation at break (tensile test)			0,9	%	DIN EN ISO 527-1	
Impact strength (Charpy)			20	kJ/m <sup>2</sup>	DIN EN ISO 179-1eU	
<i>Thermal properties</i>		<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Glass transition temperature			90	°C	-	1) (1) literature value
Melting temperature			280	°C	-	2) (2) literature value
Heat distortion temperature			276	°C	ISO-R 75 Method A	3) (3) literature value
Service temperature		short term	260	°C	-	4) (4) literature value
Service temperature		long term	230	°C	-	
<i>Other properties</i>		<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Molding shrinkage		transverse	0,86	%	DIN EN ISO 294-4	(1) 23 °C / 50 % relative humidity up to saturation
Molding shrinkage		longitudinal	0,33	%	DIN EN ISO 294-4	
Water absorption			< 0,01	%	DIN EN ISO 62	
<i>Processing parameter</i>		<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
processing temperatures			285 - 330	°C	-	
Mould temperature			130 - 160	°C	-	

→ This material can be processed as a thermoplastic taking the normal technical provisions into account. The above mentioned information refers exclusively to the injection moulding process.

→ Processing should be carried out as gently as possible, in order to maintain the maximum fibre length in the component. Back pressure and injection rate should be adjusted to the component geometry accordingly. The optimum processing temperature depends upon the respective geometry of the moulded part and can be different from machine to machine.

<i>Predrying</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Permissible residual moisture content		< 0,05	%	-	
Drying temperature		140 - 150	°C	-	
Drying time		4 - 6	h	-	

