

TECAFIL PES natural - Filament

Chemical Designation

PES (Polyethersulfone)

Colour

amber transparent

Density

1.37 g/cm³

Main features

→ Standard spool body: OD Ø 200mm,
width 55mm, Take up Ø52mm

<i>Mechanical properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Modulus of elasticity (tensile test)	1 mm/min	2650	MPa	DIN EN ISO 527-1	
Tensile strength at yield	50mm/min	85	MPa	DIN EN ISO 527-1	
Elongation at yield	50mm/min	6.9	%	DIN EN ISO 527-1	
Notched impact strength (Charpy)	(23°C)	8	kJ/m ²	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	(DSC 10°C/min)	228	°C	DIN EN ISO 11357	
Service temperature	long term	180	°C	-	
Service temperature	short term	220	°C	-	
<i>Other properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Molding shrinkage	parallel	0.85	%	DIN EN ISO 294-4	
Molding shrinkage	senkrecht	0.90	%	DIN EN ISO 294-4	
MVR	(360°C/10kg)	35	cm ³ /10 min	-	
<i>Processing parameter</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Material temperature	(Spritzgießen, Extrusion)	350 - 390	°C	-	
<i>Predrying</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Permissible residual moisture content		0.02	%	-	
Drying temperature		140	°C	-	
Drying time		4	h	-	

→ To achieve optimum mechanical properties, it is recommended to pre-dry the material with the above mentioned parameters.

→ The filament should preferably be stored in dry, normal temperature rooms and protected from direct sunlight.

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