



Polynil[®] P50 FI natural

PA66, unfilled, for inj. molding, internally lubricated, 2.7 viscosity, FDA compliant

Properties	Conditions	Unit	Standard	Values
Physical				
Density	23 °C	g/cm ³	ISO 1183	1.14
Mould shrinkage (parallel)	23 °C	%	ISO 294-4	1.4
Mould shrinkage (normal)	23 °C	%	ISO 294-4	1.6
Moisture absorption in water	23°C - 24h	%	ISO 62	1.5
Moisture absorption in water	23°C saturation	%	ISO 62	8.5
Mechanical				
Notched Izod Impact Strength	23 °C	KJ/m ²	ISO 180/A	6
Notched Izod Impact Strength	-30°C	KJ/m ²	ISO 180/A	5
Unnotched Charpy Impact Strength	23 °C	KJ/m ²	ISO 179/1eU	n.r./n.b.
Unnotched Charpy Impact Strength	-30°C	KJ/m ²	ISO 179/1eU	n.r./n.b.
Notched Charpy Impact Strength	23 °C	KJ/m ²	ISO 179/1eU	6
Notched Charpy Impact Strength	-30°C	KJ/m ²	ISO 179/1eU	5
Tensile yield stress	23 °C	MPa	ISO 527	83
Tensile modulus	23 °C	MPa	ISO 527	3100
Tensile yield strain	23 °C	%	ISO 527	6
Tensile strain at break	23 °C	%	ISO 527	50
Flexural yield stress	23 °C	MPa	ISO 178	120
Flexural yield stress	90 °C	MPa	ISO 178	NTBR
Flexural Modulus	23 °C	MPa	ISO 178	2900
Flexural Modulus	90 °C	MPa	ISO 178	NTBR
Thermal				
Melting Point	DSC	°C	ISO 3146	Approx. 258
VICAT - softening temperature	49 N	°C	ISO 306	240
HDT - deflection temperature under load	0.45 N/mm ²	°C	ISO 75	225
HDT - deflection temperature under load	1.82 N/mm ²	°C	ISO 75	72
Heat resistance - Ball test	125 °C		IEC 60309-1	OK
Heat resistance - Ball test	165 °C		IEC 60309-1	OK
Continuous service temperature	20000 h	°C	IEC 216	85
Electrical				
Dielectric Strength	2 mm	KV/mm	IEC 60 243	18
Surface resistivity	23 °C	ohm	IEC 60 093	10*12
Volume resistivity	23 °C	ohm/m	IEC 60 093	10*13
CTI - Comparative Tracking Index	3.2 mm, sol. A	V	IEC 60 112	600
Flammability				
Oxygen Index		%	IEC 4589	28
Flammability rating	3.2 (1.6) mm		UL 94	V2 (Yellow Card)
Flammability rating	0.8 (0.4) mm		UL 94	V2 (Yellow Card)
Needle flame test	2.0 (1.0) mm		IEC 60 695-11-5	NTBR
Glow wire Flammability Index	3.2 (0.8) mm	°C	IEC 60 695-2-12	850 (750)
Glow wire Ignition Temperature	3.2 (0.8) mm	°C	IEC 60 695-2-13	750 (775)
Flammability rating	355x100x1 mm		FMVSS No.302	SE

The information in this datasheet is given in good faith but without warranty. These data do not release you from the obligation to test our product as to their suitability for the intended processes and uses. The application, use and processing of our products and the products manufactured by you are beyond our control and, therefore, entirely your own responsibility.

