

Technical Data Sheet



POLYMAN® (PC) XP 41 R 20 GF

Polycarbonate
Engineering Plastics

Product Description

20% glass fibre reinforced PC grade

General

Filler / Reinforcement	• Glass Fiber, 20% Filler by Weight
Processing Method	• Injection Molding
Resin ID (ISO 1043)	• PC-GF

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.34 g/cm³	1.34 g/cm³	ISO 1183/A
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	5.00 cm³/10min	5.00 cm³/10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	0.40 %	0.40 %	
Flow	0.20 %	0.20 %	

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	798000 psi	5500 MPa	ISO 527-2/1A/1
Tensile Stress (Break)	16000 psi	110 MPa	ISO 527-2/1A/5
Tensile Strain (Break)	3.0 %	3.0 %	ISO 527-2/1A/5

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F (-30°C)	5.7 ft·lb/in²	12 kJ/m²	
73°F (23°C)	6.2 ft·lb/in²	13 kJ/m²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F (-30°C)	34 ft·lb/in²	72 kJ/m²	
73°F (23°C)	29 ft·lb/in²	61 kJ/m²	

Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Ball Indentation Hardness (H 358/30)	21000 psi	145 MPa	ISO 2039-1

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Heat Deflection Temperature			
66 psi (0.45 MPa), Unannealed	293 °F	145 °C	ISO 75-2/Bf
264 psi (1.8 MPa), Unannealed	280 °F	138 °C	ISO 75-2/Af
Vicat Softening Temperature	306 °F	152 °C	ISO 306/B50

Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Surface Resistivity	> 1.0E+15 ohms	> 1.0E+15 ohms	IEC 60093
Volume Resistivity	> 1.0E+13 ohms·m	> 1.0E+13 ohms·m	IEC 62631-3-1
Comparative Tracking Index	175 V	175 V	IEC 60112

Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Burning Rate			
0.0787 in (2.00 mm)	< 3.9 in/min	< 100 mm/min	ISO 3795
0.0787 in (2.00 mm)	< 3.9 in/min	< 100 mm/min	FMVSS 302
Flammability Classification			IEC 60695-11-10, -20
0.06 in (1.5 mm)	HB	HB	
0.12 in (3.0 mm)	HB	HB	

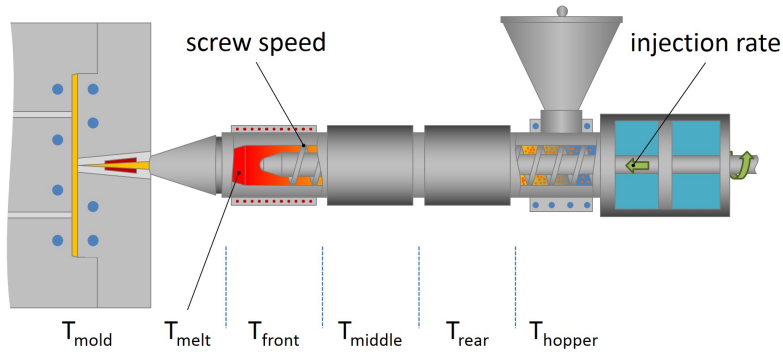
Additional Information

- 1.) Not for use in food contact applications
- 2.) Not for use in medical or pharmaceutical applications

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Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	248 °F	120 °C
Drying Time	4.0 to 12 hr	4.0 to 12 hr
Processing (Melt) Temp	536 to 590 °F	280 to 310 °C
Mold Temperature	185 to 239 °F	85 to 115 °C

Notes

These are typical property values not to be construed as specification limits.