

Pocan® B3225 000000
PBT-GF20

Envalior

Injection Molding, 20% Glass Reinforced, General purpose

ISO 1043 PBT-GF20

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	20	cm ³ /10min	ISO 1133
Temperature	260	°C	-
Load	2.16	kg	-
Molding shrinkage, parallel	0.5	%	ISO 294-4, 2577
Molding shrinkage, normal	1.4	%	ISO 294-4, 2577

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	7100	MPa	ISO 527
Stress at Break	120	MPa	ISO 527
Strain at Break	3.4	%	ISO 527
Tensile Creep Modulus, 1h	6900	MPa	ISO 899-1
Tensile Creep Modulus, 1000h	6300	MPa	ISO 899-1
Impact Strength (Charpy), +23°C	50	kJ/m ²	ISO 179/1eU
Impact Strength (Charpy), -30°C	45	kJ/m ²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	10	kJ/m ²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	10	kJ/m ²	ISO 179/1eA
Puncture - maximum force, +23°C	635	N	ISO 6603-2
Puncture - maximum force, -30°C	626	N	ISO 6603-2
Puncture energy, +23°C	10.6	J	ISO 6603-2
Puncture energy, -30°C	1.8	J	ISO 6603-2

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Melting Temperature (10°C/min)	225	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	205	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	220	°C	ISO 75-1/-2
Coeff. of Linear Therm. Expansion, parallel	30	E-6/K	ISO 11359-1/-2
Coeff. of Linear Therm. Expansion, normal	110	E-6/K	ISO 11359-1/-2
Burning Behav. at 1.5 mm Nom. Thickn.	HB	class	UL 94
Thickness tested	1.5	mm	-
Oxygen index	20	%	ISO 4589-1/-2

Electrical Properties	Value	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	3.8	-	IEC 62631-2-1
Relative permittivity, 1MHz	3.6	-	IEC 62631-2-1
Dissipation Factor, 100Hz	15	E-4	IEC 62631-2-1
Dissipation Factor, 1MHz	200	E-4	IEC 62631-2-1
Volume Resistivity	>1E13	Ohm*m	IEC 62631-3-1
Surface Resistivity	>1E15	Ohm	IEC 62631-3-2
Electric Strength	30	kV/mm	IEC 60243-1
Comparative tracking index	325	-	IEC 60112

Other Properties	Value	Unit	Test Standard
ISO Data			
Water Absorption	0.4	%	Sim. to ISO 62
Humidity absorption	0.2	%	Sim. to ISO 62
Density	1460	kg/m ³	ISO 1183

Material Specific Properties	Value	Unit	Test Standard
ISO Data			
Viscosity number	100	cm ³ /g	ISO 307, 1157, 1628

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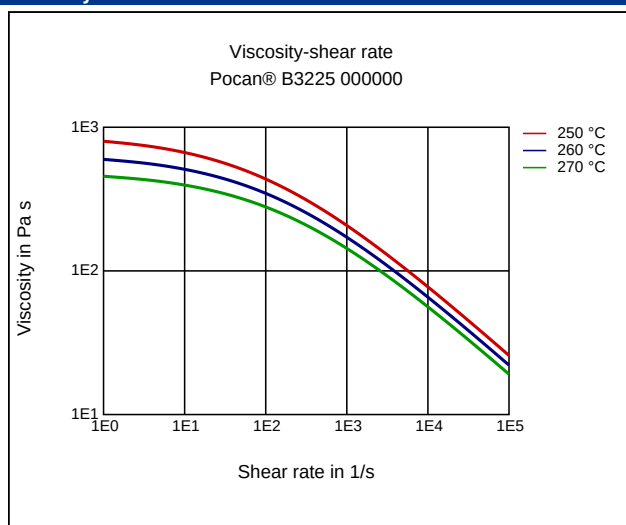
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Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	260	°C	ISO 294
Injection Molding, mold temperature	80	°C	ISO 294

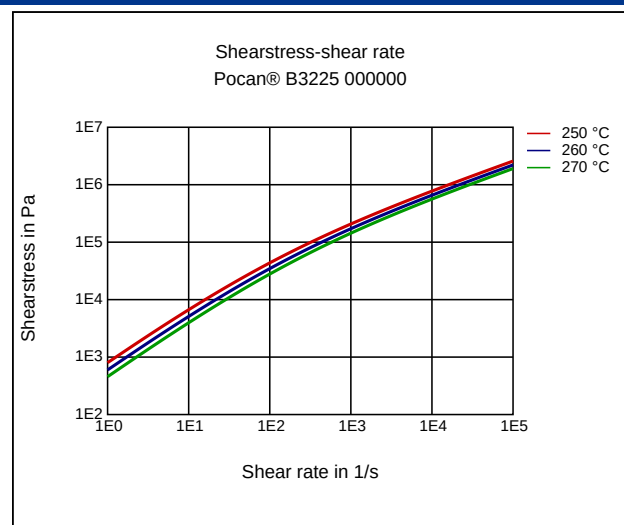
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	120	°C	-
Pre-drying - Time	4 - 8	h	-
Processing humidity	≤0.02	%	-
Melt temperature	250 - 270	°C	-
Mold temperature	80 - 100	°C	-

Diagrams

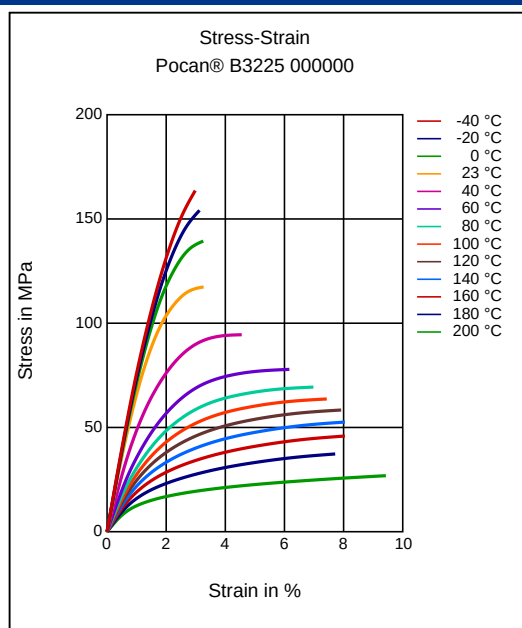
Viscosity-shear rate



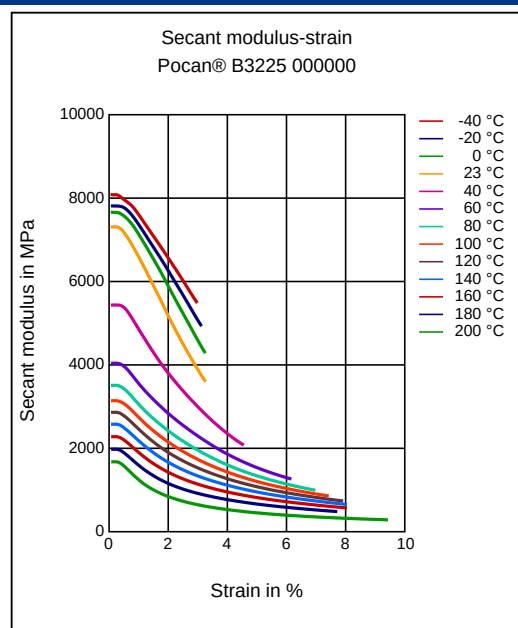
Shearstress-shear rate



Stress-strain



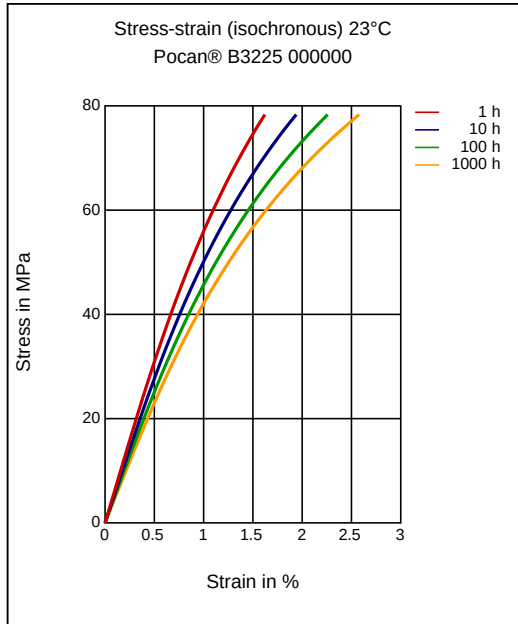
Secant modulus-strain



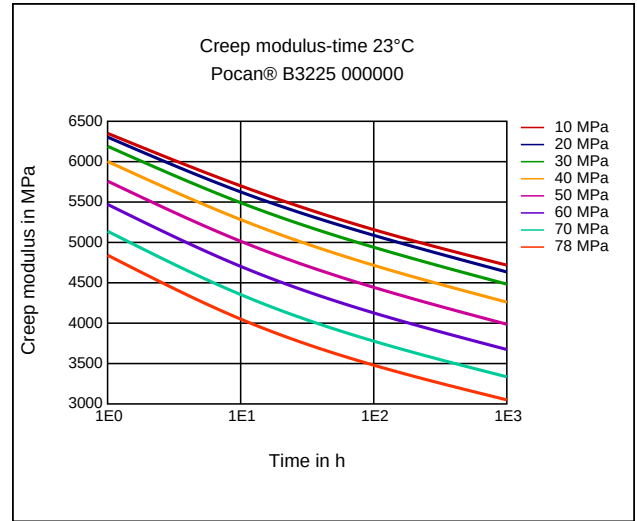
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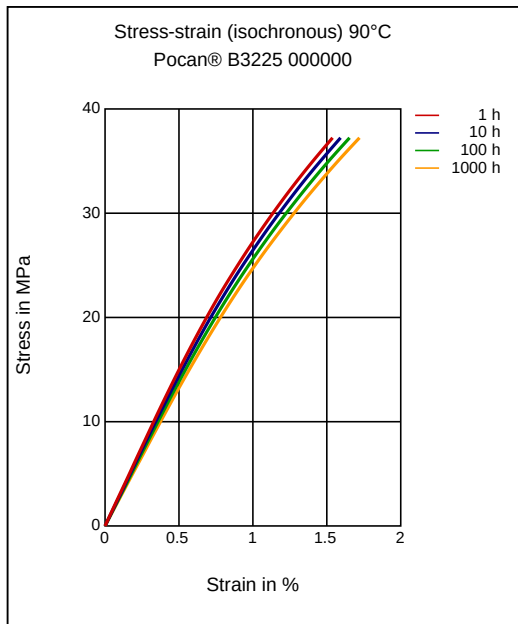
Stress-strain (isochronous) 23°C



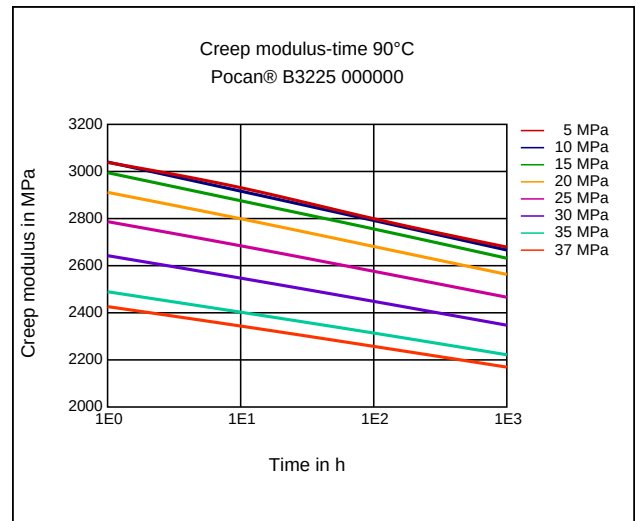
Creep modulus-time 23°C



Stress-strain (isochronous) 90°C



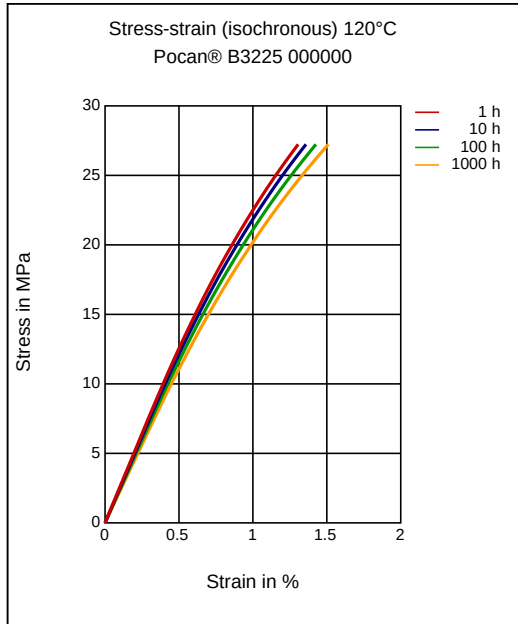
Creep modulus-time 90°C



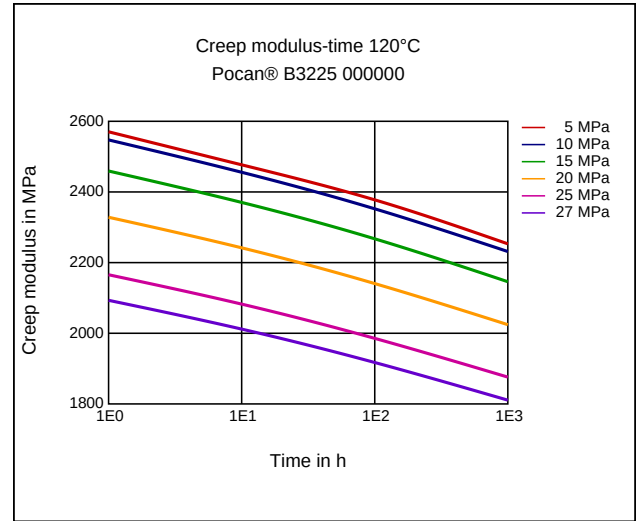
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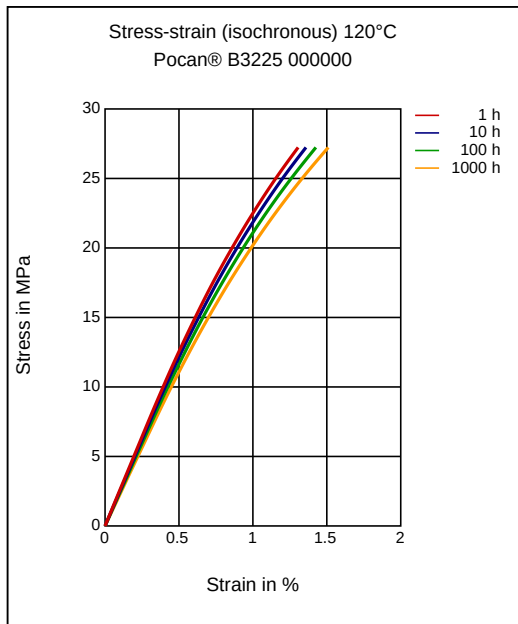
Stress-strain (isochronous) 120°C



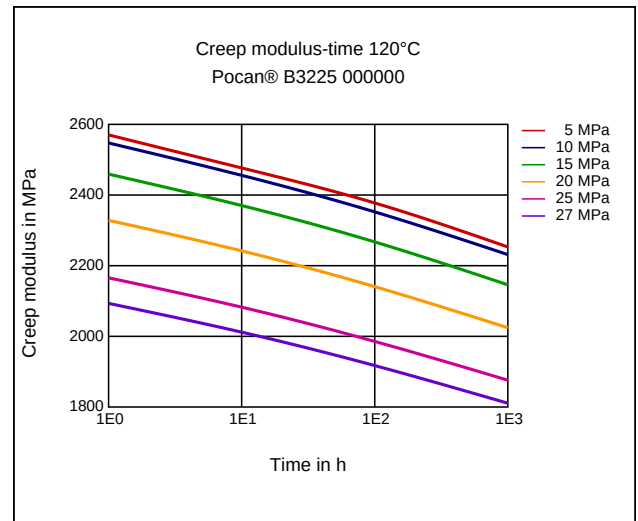
Creep modulus-time 120°C



Stress-strain (isochronous) 120°C



Creep modulus-time 120°C

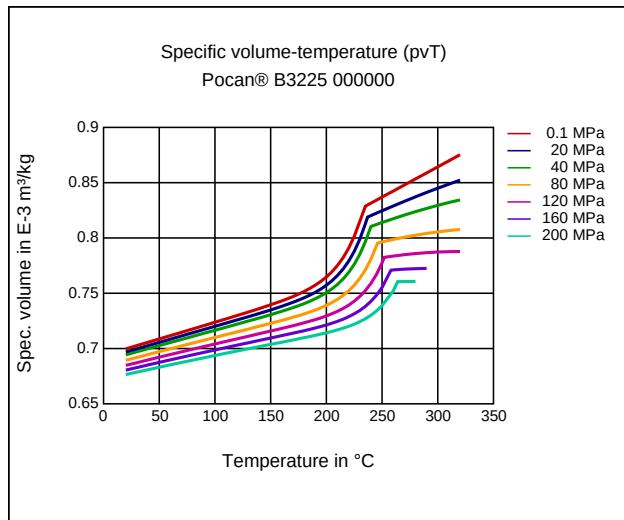


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Specific volume-temperature (pvT)



Characteristics

Processing

Injection Molding

Additives

Release agent

Delivery form

Pellets

Special Characteristics

Heat aging stabilized

Injection Molding

PREPROCESSING

Residual moisture content: 0.00 - 0.02 %

Drying temperature circulating air dryer: 120 °C

Drying time circulating air dryer: 4 - 8 h

PROCESSING

Melt temperature (Tmin - Tmax): 250 - 270 °C

Mold temperature: 80 - 100 °C