

Pocan® BFN4231 000000

PBT-GF25 FR(40+30)

Envalior

Injection Molding, 25% Glass Reinforced, Flame Retardant (halogen free)

ISO 1043 PBT-GF25 FR(40+30)

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	40	cm ³ /10min	ISO 1133
Temperature	260	°C	-
Load	5	kg	-
Molding shrinkage, parallel	0.5	%	ISO 294-4, 2577
Molding shrinkage, normal	1.2	%	ISO 294-4, 2577

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	10000	MPa	ISO 527
Stress at Break	100	MPa	ISO 527
Strain at Break	2	%	ISO 527
Impact Strength (Charpy), +23°C	40	kJ/m ²	ISO 179/1eU
Impact Strength (Charpy), -30°C	35	kJ/m ²	ISO 179/1eU
Flexural Modulus (23°C)	10000	MPa	ISO 178
Impact Strength (Izod), 23°C	36	kJ/m ²	ISO 180/1U

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Melting Temperature (10°C/min)	220	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	210	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	224	°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	90	E-6/K	ISO 11359-1/-2
Burning Behav. at 1.5 mm Nom. Thickn.	V-0	class	UL 94
Burning Behav. 5V at Thickness h	5VA	class	IEC 60695-11-20
Thickness tested	1.5	mm	-
Oxygen index	43.7	%	ISO 4589-1/-2

Electrical Properties	Value	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	3.8	-	IEC 62631-2-1
Relative permittivity, 1MHz	3.7	-	IEC 62631-2-1
Dissipation Factor, 100Hz	40	E-4	IEC 62631-2-1
Dissipation Factor, 1MHz	140	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	35	kV/mm	IEC 60243-1
Comparative tracking index	575	-	IEC 60112

Other Properties	Value	Unit	Test Standard
ISO Data			
Water Absorption	0.5	%	Sim. to ISO 62
Humidity absorption	0.1	%	Sim. to ISO 62
Density	1520	kg/m ³	ISO 1183

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	-

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Mold temperature

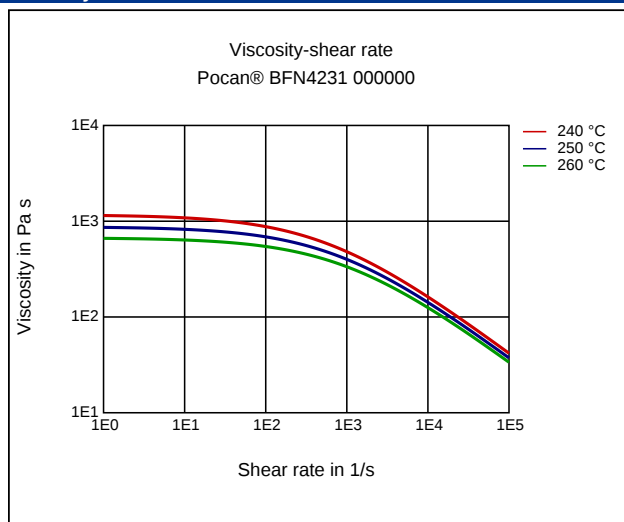
70 - 90

°C

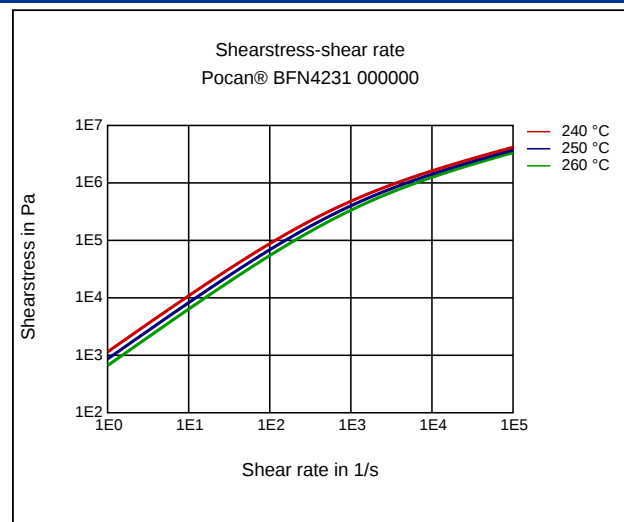
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Diagrams

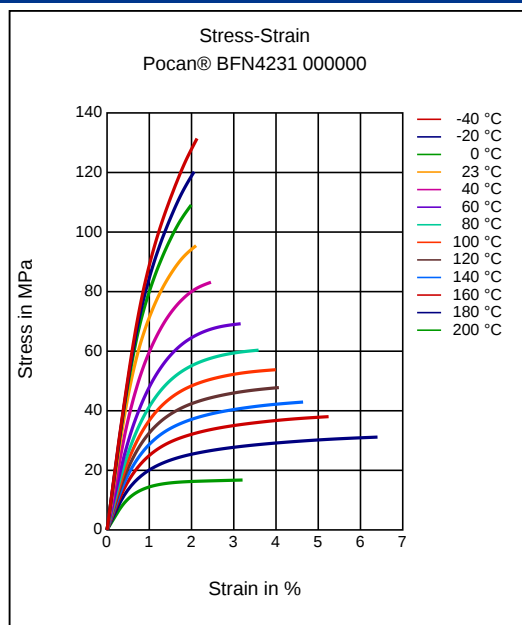
Viscosity-shear rate



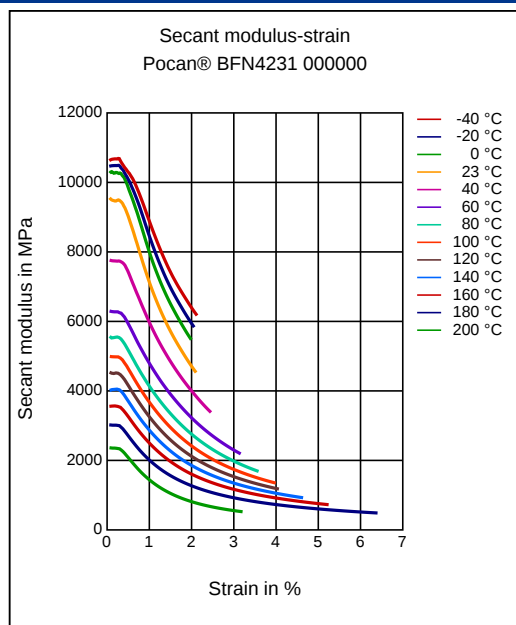
Shearstress-shear rate



Stress-strain



Secant modulus-strain

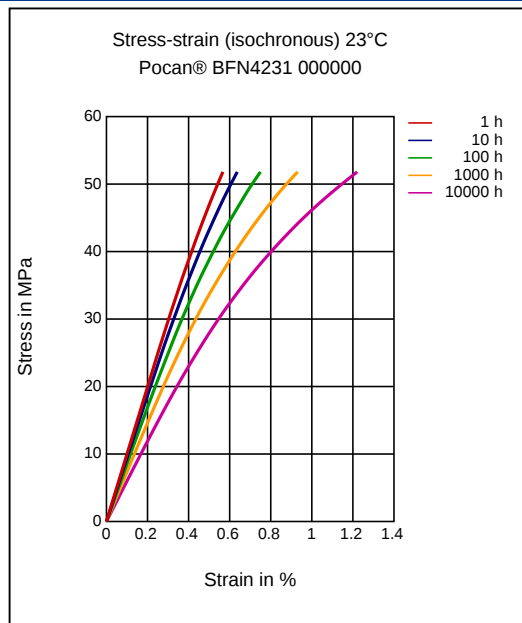


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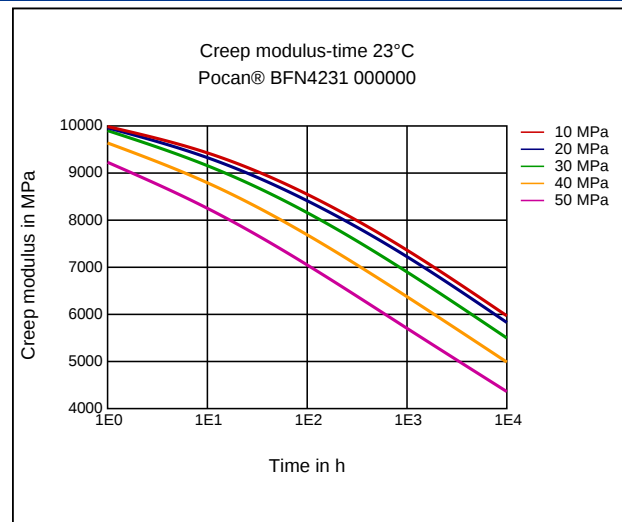
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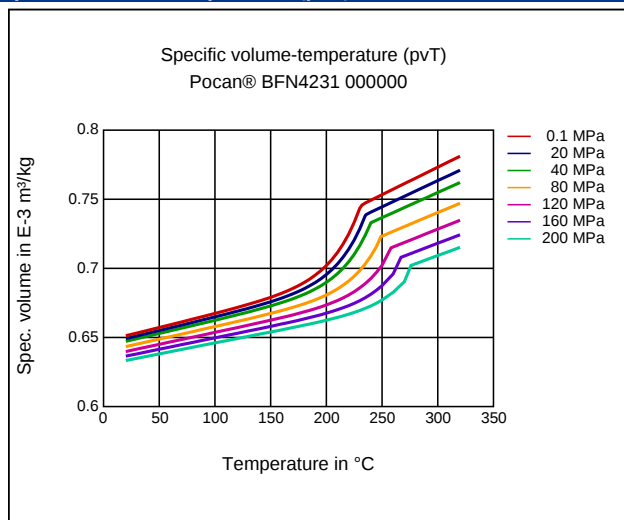
Stress-strain (isochronous) 23 °C



Creep modulus-time 23 °C



Specific volume-temperature (pvT)



Characteristics

Processing

Injection Molding

Delivery form

Pellets

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

admissible residence time at Tmax: <5 min

Mold temperature: 70 - 90 °C

Special Characteristics

Flame retardant, Halogen-free, Heat aging stabilized