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Envalior
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ALBIS

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PBT-GF10 Envalior

Injection Molding, 10% Glass Reinforced, General purpose

ISO 1043 PBT-GF10

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	30	cm³/10min	ISO 1133
Temperature	260	°C	-
Load	2.16	kg	-
Molding shrinkage, parallel	0.9	%	ISO 294-4, 2577
Molding shrinkage, normal	1.1	%	ISO 294-4, 2577

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	4900	MPa	ISO 527
Stress at Break	90	MPa	ISO 527
Strain at Break	4	%	ISO 527
Impact Strength (Charpy), +23°C	25	kJ/m²	ISO 179/1eU
Impact Strength (Charpy), -30°C	25	kJ/m²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	10	kJ/m²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	10	kJ/m²	ISO 179/1eA
Puncture energy, +23°C	1.5	J	ISO 6603-2
Puncture energy, -30°C	1.5	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)	190	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	215	°C	ISO 75-1/-2
Coeff. of Linear Therm. Expansion, parallel	50	E-6/K	ISO 11359-1/-2
Coeff. of Linear Therm. Expansion, normal	130	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	3.6	-	IEC 62631-2-1
Relative permittivity, 1MHz	3.4	-	IEC 62631-2-1
Dissipation Factor, 100Hz	15	E-4	IEC 62631-2-1
Dissipation Factor, 1MHz	180	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	275	-	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	1380	kg/m³	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	%	-

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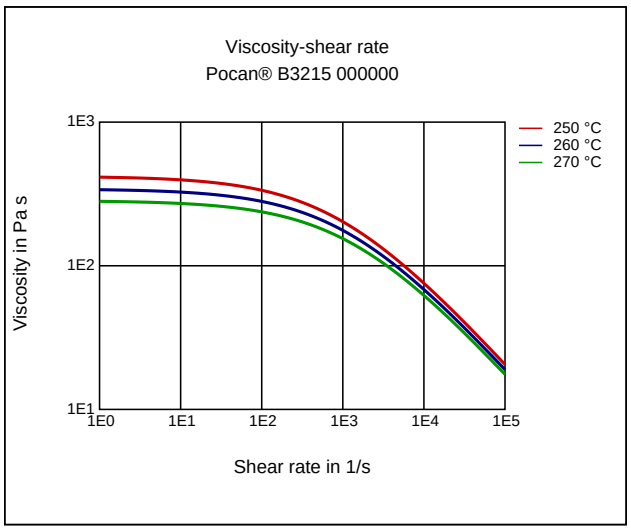
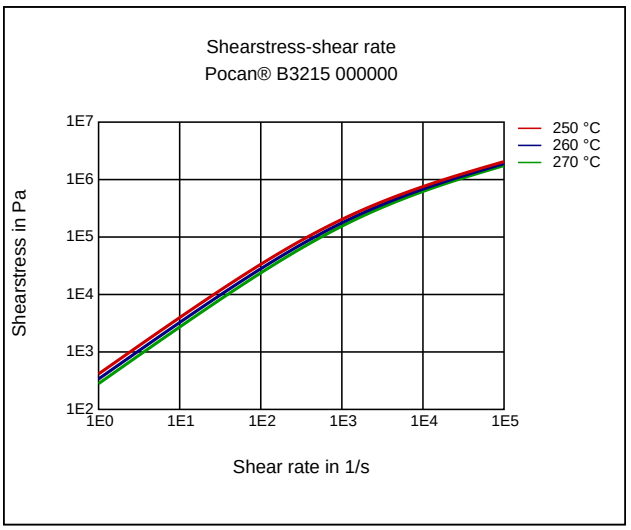
Melt temperature	250 - 270	°C	-
Mold temperature	80 - 100	°C	-

Diagrams

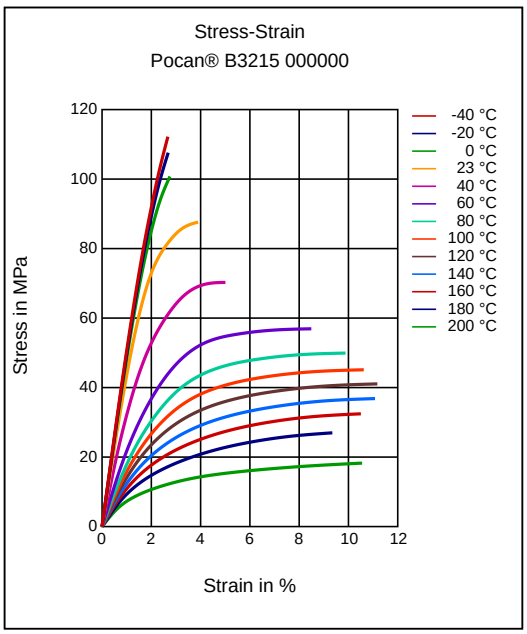
Viscosity-shear rate



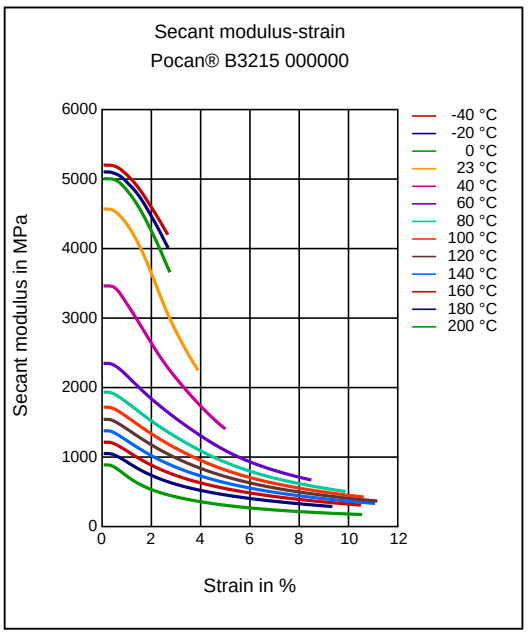
Shearstress-shear rate



Stress-strain



Secant modulus-strain



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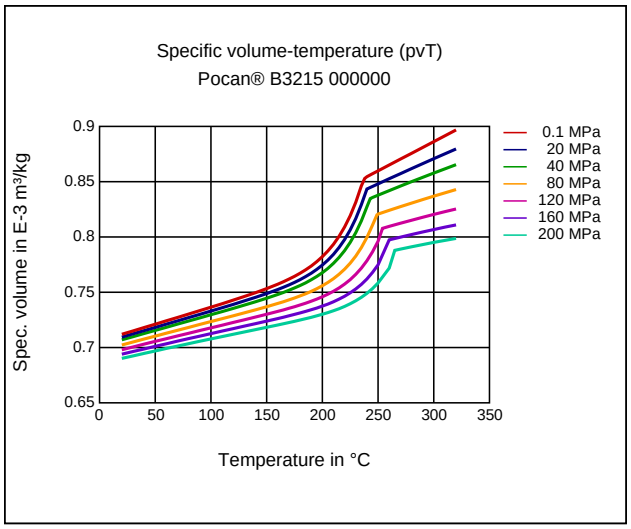
Specific volume-temperature (pvT)



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