

Pocan® ECOB4239 000000
PBT-GF30 FR(17)

Envalior

Injection Molding, 30% Glass Reinforced, Flame Retardant, Recycled Content

ISO 1043 PBT-GF30 FR(17)

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	37	cm ³ /10min	ISO 1133
Temperature	260	°C	-
Load	5	kg	-
Molding shrinkage, parallel	0.3	%	ISO 294-4, 2577
Molding shrinkage, normal	0.9	%	ISO 294-4, 2577

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	11500	MPa	ISO 527
Stress at Break	125	MPa	ISO 527
Strain at Break	2.1	%	ISO 527
Impact Strength (Charpy), +23°C	50	kJ/m ²	ISO 179/1eU
Impact Strength (Charpy), -30°C	50	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	669	N	ISO 6603-2
Puncture - maximum force, -30°C	649	N	ISO 6603-2
Puncture energy, +23°C	2.3	J	ISO 6603-2
Puncture energy, -30°C	2.1	J	ISO 6603-2
Flexural Modulus (23°C)	10500	MPa	ISO 178
Flexural strength	200	MPa	ISO 178
Notched Impact Strength (Izod), 23°C	10	kJ/m ²	ISO 180/1A
Notched Impact Strength (Izod)	10	kJ/m ²	ISO 180/1A
Temperature	-30	°C	-
Impact Strength (Izod), 23°C	45	kJ/m ²	ISO 180/1U
Ball Indentation Hardness	186	MPa	ISO 2039-1

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)	200	°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	20	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	32	%	ISO 4589-1/-2
Glow Wire (GWFI, Flammability Index)	960	°C	IEC 60695-2-12
GWFI - thickness tested (1)	0.75	mm	-
Glow Wire Ignition Temperature)	725	°C	IEC 60695-2-13
GWIT - thickness tested (1)	0.75	mm	-
Glow Wire Ignition Temperature)	725	°C	IEC 60695-2-13
GWIT - thickness tested (2)	1.5	mm	-
Glow Wire Ignition Temperature)	725	°C	IEC 60695-2-13
GWIT - thickness tested (3)	3	mm	-

Electrical Properties	Value	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	3.9	-	IEC 62631-2-1
Relative permittivity, 1MHz	3.8	-	IEC 62631-2-1
Dissipation Factor, 100Hz	60	E-4	IEC 62631-2-1
Dissipation Factor, 1MHz	520	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

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Comparative tracking index 275 - IEC 60112

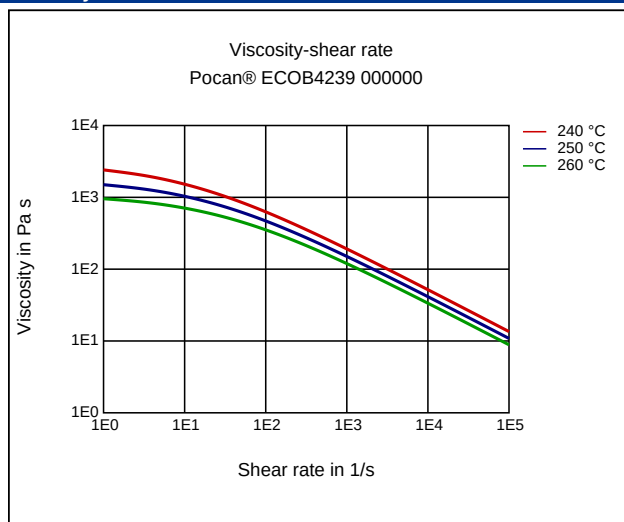
Other Properties	Value	Unit	Test Standard
ISO Data			
Water Absorption	0.35	%	Sim. to ISO 62
Humidity absorption	0.1	%	Sim. to ISO 62
Density	1650	kg/m ³	ISO 1183
Bulk density	800	kg/m ³	-

Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	250	°C	ISO 294
Injection Molding, mold temperature	80	°C	ISO 294

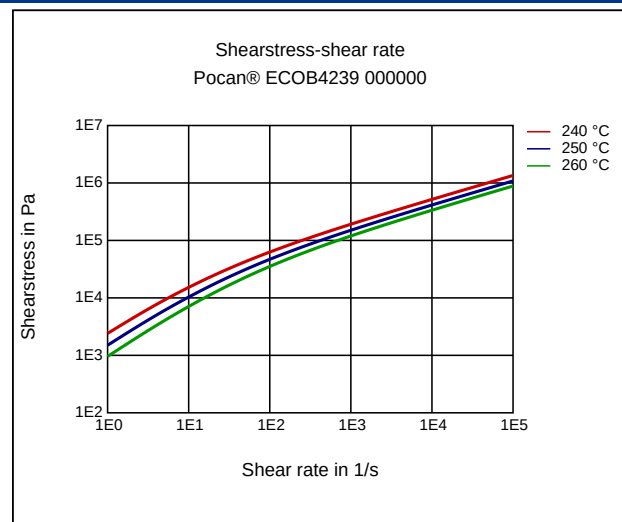
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	120	°C	-
Pre-drying - Time	4 - 8	h	-
Processing humidity	≤0.02	%	-
Melt temperature	240 - 260	°C	-
Mold temperature	80 - 100	°C	-

Diagrams

Viscosity-shear rate



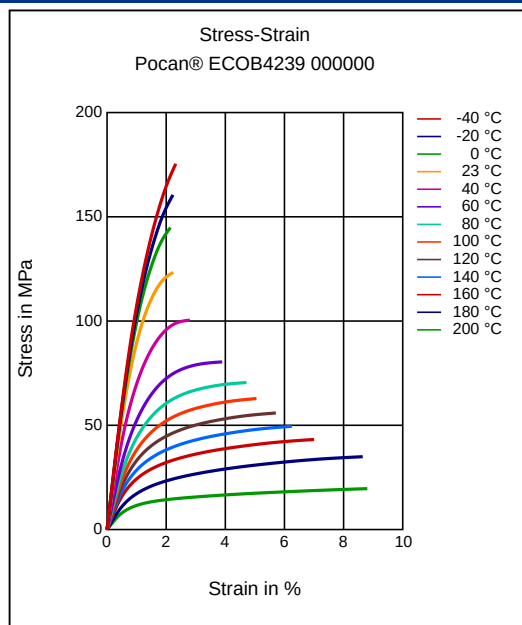
Shearstress-shear rate



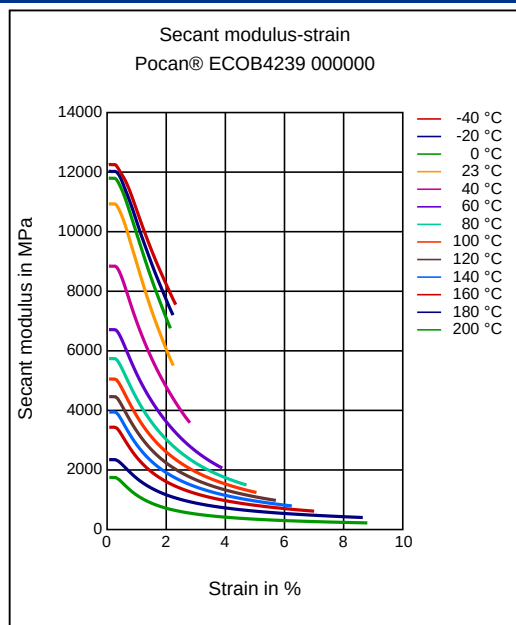
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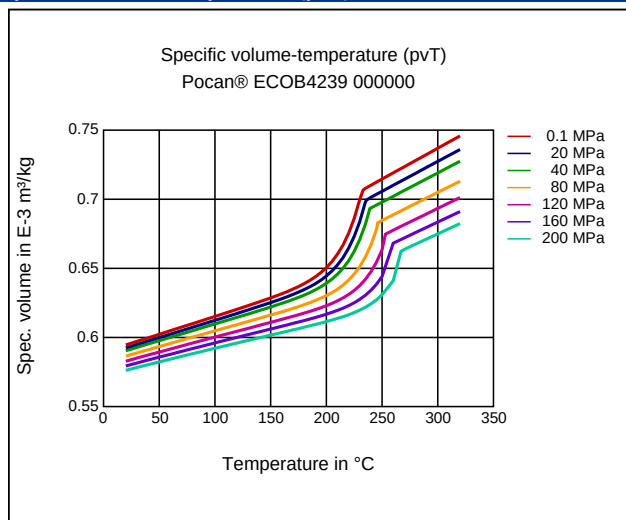
Stress-strain



Secant modulus-strain



Specific volume-temperature (pvT)



Characteristics

Processing

Injection Molding

Delivery form

Pellets

Additives

Release agent

Special Characteristics

Flame retardant

Certifications

Recycled Resin Content, ISCC Plus

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): 240 - 260 °C

Mold temperature: 80 - 100 °C