Property Data

Envalior
Imagine the Future

Pocan® BFN4231

PBT–GF25 FR(40+30)

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

Print Date: 2024–12–10

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
RHEOLOGICAL PROPERTIES	**VALUE**		
Melt volume–flow rate	40	cm³/10min	ISO 1133
Temperature	260	°C	ISO 1133
Load	5	kg	ISO 1133
Molding shrinkage (normal)	1.2	%	ISO 294–4
Molding shrinkage (parallel)	0.5	%	ISO 294–4
MECHANICAL PROPERTIES	**VALUE**		
Tensile modulus	10000	MPa	ISO 527–1/–2
Stress at break	100	MPa	ISO 527–1/–2
Strain at break	2	%	ISO 527–1/–2
Flexural modulus	9800	MPa	ISO 178
Flexural strength	165	MPa	ISO 178
Flexural strain at flexural strength	2.4	%	ISO 178–A
Charpy impact strength (+23°C)	40	kJ/m²	ISO 179/1eU
Charpy impact strength (–30°C)	35	kJ/m²	ISO 179/1eU
Izod impact strength (+23°C)	36	kJ/m²	ISO 180/1U
Izod impact strength (–30°C)	33	kJ/m²	ISO 180–1U
THERMAL PROPERTIES	**VALUE**		
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)	0.3	E–4/°C	ISO 11359–1/–2

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Coeff. of linear therm. expansion (normal)	0.9	E-4/°C	ISO 11359-1/-2
Burning Behav. at 0.75 mm nom. thickn.	V-0	class	IEC 60695-11-10
Thickness tested	0.75	mm	IEC 60695-11-10
Burning Behav. at 1.5 mm nom. thickn.	V-0	class	IEC 60695-11-10
Thickness tested	1.5	mm	IEC 60695-11-10
Burning Behav. at 3.0 mm nom. thickn.	V-0	class	IEC 60695-11-10
Thickness tested	3	mm	IEC 60695-11-10
Oxygen index	43.7	%	ISO 4589-1/-2
Glow Wire Flammability Index GWFI	960	°C	IEC 60695-2-12
GWFI (Thickness (1) tested)	0.4	mm	IEC 60695-2-12
Glow Wire Flammability Index GWFI	960	°C	IEC 60695-2-12
GWFI (Thickness (2) tested)	0.75	mm	IEC 60695-2-12
Glow Wire Ignition Temperature GWIT	850	°C	IEC 60695-2-13
GWIT (Thickness (1) tested)	0.4	mm	IEC 60695-2-13
Glow Wire Ignition Temperature GWIT	775	°C	IEC 60695-2-13
GWIT (Thickness (2) tested)	0.75	mm	IEC 60695-2-13
Glow Wire Ignition Temperature GWIT	825	°C	IEC 60695-2-13
GWIT (Thickness (3) tested)	1.5	mm	IEC 60695-2-13
Glow Wire Ignition Temperature GWIT	850	°C	IEC 60695-2-13
GWIT (Thickness (4) tested)	3	mm	IEC 60695-2-13

ELECTRICAL PROPERTIES	VALUE		
Relative permittivity (100Hz)	3.8	-	IEC 62631-2-1
Relative permittivity (1 MHz)	3.7	-	IEC 62631-2-1
Dissipation factor (100 Hz)	40	E-4	IEC 62631-2-1
Dissipation factor (1 MHz)	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

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Comparative tracking index	575	V	IEC 60112
Comparative tracking index (PLC)	0	class	UL 746A

OTHER PROPERTIES	VALUE		
Water absorption	0.5	%	Sim. to ISO 62
Humidity absorption	0.1	%	Sim. to ISO 62
Density	1520	kg/m³	ISO 1183

PROCESSING RECOMMENDATIONS	VALUE		
Drying temperature circulating air dryer	120	°C	
Drying time circulating air dryer	4–8	h	
Residual moisture content	0.00–0.02	%	acc. to Karl Fischer
Melt temperature (Tmin – Tmax)	250–265	°C	
Mold temperature	70–90	°C	
admissible residence time at Tmax	<5	min	

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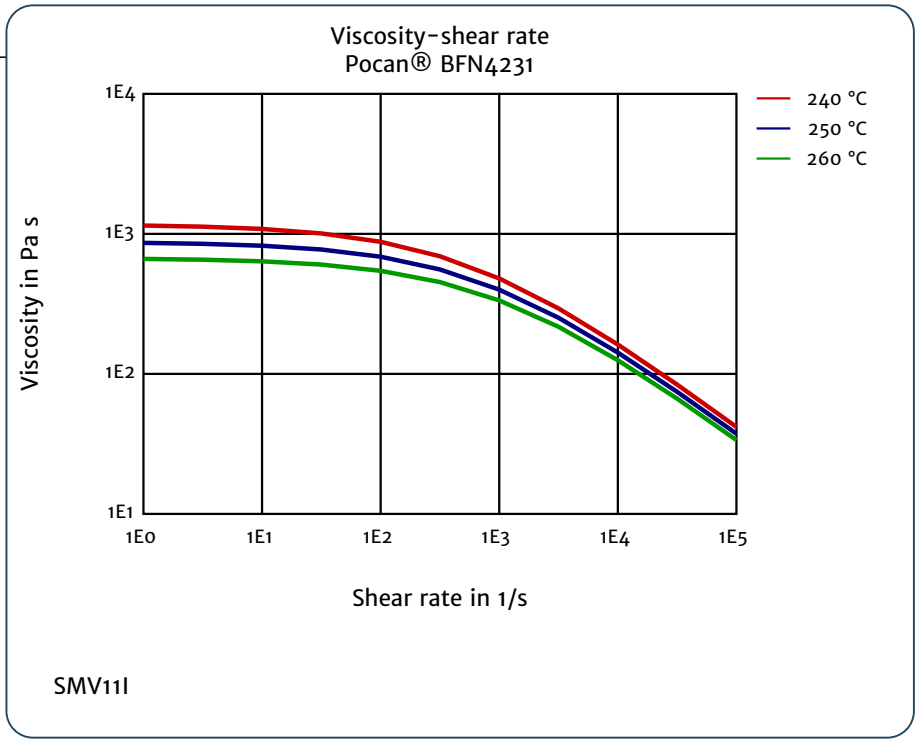
Viscosity–shear rate



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