Property Data

Envalior
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Pocan® BFN4221Z

PBT-I-GF20 FR(40)

Injection Molding, 20% Glass Fiber Reinforced, Flame Retardant (halogen free), Impact Modified

Print Date: 2025-10-04

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
RHEOLOGICAL PROPERTIES	**VALUE**		
Melt volume-flow rate	13	cm³/10min	ISO 1133
Temperature	260	°C	ISO 1133
Load	5	kg	ISO 1133
Molding shrinkage (normal)	1.1	%	ISO 294-4
Molding shrinkage (parallel)	0.6	%	ISO 294-4
MECHANICAL PROPERTIES	**VALUE**		
Tensile modulus	7300	MPa	ISO 527-1/-2
Stress at break	85	MPa	ISO 527-1/-2
Strain at break	2.9	%	ISO 527-1/-2
Flexural modulus	7400	MPa	ISO 178
Flexural strength	145	MPa	ISO 178
Flexural strain at flexural strength	3.2	%	ISO 178-A
Charpy impact strength (+23°C)	45	kJ/m²	ISO 179/1eU
Charpy impact strength (-30°C)	45	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	7	kJ/m²	ISO 179/1eA
Charpy notched impact strength (-30°C)	6	kJ/m²	ISO 179/1eA
THERMAL PROPERTIES	**VALUE**		
Melting temperature (10°C/min)	220	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	193	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	0.3	E-4/°C	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	1.2	E-4/°C	ISO 11359-1/-2

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
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
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	775	°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	750	°C	IEC 60695–2–13
GWIT (Thickness (3) tested)	1.5	mm	IEC 60695–2–13
Glow Wire Ignition Temperature GWIT	750	°C	IEC 60695–2–13
GWIT (Thickness (4) tested)	3	mm	IEC 60695–2–13

ELECTRICAL PROPERTIES	VALUE		
Volume resistivity	9.7E13	Ohm*m	IEC 62631–3–1
Surface resistivity	3.8E16	Ohm	IEC 62631–3–2
Electric strength	30	kV/mm	IEC 60243–1
Comparative tracking index	600	V	IEC 60112
Comparative tracking index (PLC)	0	class	UL 746A

OTHER PROPERTIES	VALUE		
Density	1460	kg/m³	ISO 1183

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
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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