Property Data

Envalior
Imagine the Future

Pocan® ECOBFN4231

PBT–GF25 FR(40+30)

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

Print Date: 2024–09–17

Sustainability

Mass balanced
Recycled based

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**		

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
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
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

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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
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